

SUPERIOR COURT OF NEW JERSEY
LAW DIVISION - MIDDLESEX COUNTY
DOCKET NO. L-1141-99

- - - - - :
MYRON A. MEHLMAN as Adminis- :
tratrix Ad Prosequendum and : Civil Action
Administrator of the Estate :
of Constance L. Mehlman, :
deceased, : TRANSCRIPT OF
 : PROCEEDINGS
Plaintiff, :
 : Volume 4
vs. : (Pages 667 - 858)
 :
PHILIP MORRIS, INC., :
(PHILIP MORRIS, U.S.A.), :
R.J. REYNOLDS TOBACCO CO., :
 :
Defendants. :
- - - - - :

Thursday, April 5, 2001
8:56 a.m.
1 JFK Square
New Brunswick, New Jersey

B E F O R E:

MARINA J. CORODEMUS, J.S.C., and a
Jury

Reported by: Patricia J. Russoniello,
Certified Shorthand Reporter

COMPUTER TRANSCRIPTION BY
JOHN J. PROUT & ASSOCIATES, INC.
CERTIFIED SHORTHAND REPORTERS
147 COLUMBIA TURNPIKE, SUITE 105
FLORHAM PARK, NEW JERSEY 07932
TEL: (973) 660-0660 FAX: (973) 660-1966

668

1

A P P E A R A N C E S:

2

NESS, MOTLEY, LOADHOLT, RICHARDSON
& POOLE, ESQS.

3

By RHETT D. KLOK, ESQ.

4

CHARLES W. PATRICK, ESQ.

DONALD A. MIGLIORI, ESQ.

5

-and-

WILENTZ, GOLDMAN & SPITZER, ESQS.

6

By ROBERT T. HAEFELE, ESQ.

7 Attorneys for Plaintiff
8 RIKER, DANZIG, SCHERER, HYLAND
9 & PERRETTI, LLP
10 By KEITH J. WEINGOLD, ESQ.
11 -and-
12 JONES, DAY, REAVIS & POGUE, ESQS.
13 By PETER J. BIERSTEKER, ESQ.
14 KIMBERLY C. ROOSEVELT, ESQ.
15 Attorneys for Defendant,
16 R.J. Reynolds Tobacco Co.
17
18 DECHERT
19 By EZRA D. ROSENBERG, ESQ.
20 BRUCE W. CLARK, ESQ.
21 CHRISTOPHER J. MICHIE, ESQ.
22 RONNIE E. FUCHS, ESQ.
23 -and-
24 BROWN & CONNERY, LLP
25 By STEPHEN J. DE FEO, ESQ.
Attorneys for Defendant,
Philip Morris, Inc.

18
19
20
21
22
23
24
25

669

1 I N D E X

2
3 WITNESS DIRECT
4 DAVID MICHAEL BURNS, M.D.
5 By Mr. Patrick 705
6
7
8
9

10
11 E X H I B I T S
12
13 NUMBER DESCRIPTION PAGE
14
15 Plaintiff's Drawing by Dr. Burns 798
16 Exhibit A
17
18
19
20
21
22
23
24
25

670

1 (The following takes place in

2 chambers:)

3 THE COURT: I'm in with gentlemen for
4 all parties on Thursday, the 5th of April. Unless I
5 am mistaken otherwise I believe Dr. Burns is coming.

6 MR. PATRICK: He's here.

7 THE COURT: Okay.

8 MR. PATRICK: He's ready to go on the
9 stand.

10 THE COURT: All right.

11 MR. PATRICK: And we just have one
12 issue. All of the documents have been agreed to.
13 We've worked last evening and made sure everything --

14 THE COURT: Isn't that wonderful?

15 MR. BIERSTEKER: All but one.

16 THE COURT: Is this the smoking gun
17 issue? Yeah.

18 MR. PATRICK: This one grows out of
19 the --

20 THE COURT: Dublin Times. Did anyone
21 pick that up?

22 MR. PATRICK: This one grows out of
23 the ruling that you made I guess in the Consentino
24 case on the Bilolli (phonetic) documents and this is
25 one of those documents and my understanding as you
671

1 indicated the other day that these documents were
2 deprived and the question remains as to whether --

3 THE COURT: They not only were
4 deprived but as your associate reminded me, they
5 were also in the public domain. I hadn't read that
6 opinion in quite some time. It really had been
7 awhile. Go ahead.

8 MR. PATRICK: Well, so the question
9 just remains whether or not the document is
10 admissible. Because Your Honor found that these
11 documents were in the public domain we would assert
12 that you have found that they are, in fact,
13 admissible. We have a disagreement and he's raised
14 the question as to whether or not --

15 THE COURT: He meaning Mr. Biersteker
16 because we're not on a visual camera also.

17 You want to -- is it a particular
18 document or are you moving them today in toto?

19 MR. PATRICK: Just one document today --

20 THE COURT: Can I see which document
21 it is?

22 MR. PATRICK: This is it.

23 MR. BIERSTEKER: It's the Jones, Day
24 R and D memo.

25 MR. ROSENBERG: And, Your Honor, just
672

1 for the record, can we proceed from here on on the
2 basis that an objection by one of the defendants is
3 deemed an objection by both?

4 THE COURT: (Indicates.)

5 MR. ROSENBERG: No?

6 THE COURT: I have to -- can we go
7 off the record -- we can put this on the record.
8 I know you have been acting in
9 concert for purposes of opening and discovery and
10 the rest.

11 The problem I have is you identify
12 two different types of cigarettes, one made by your

13 company, one made by your company.
14 Now, I don't know because why would I
15 know what the specific testimony is going to be
16 about what she smoked when and if she smoked one
17 longer than the other or what the research was one
18 to the other so a judge's greatest fear is that we
19 have something in the form of an inconsistent
20 verdict later on because it seems to me that for you
21 to say that either we combine all the defense
22 questions in one for the Interrogatories or we have
23 them split because, you see, if you take this --
24 suppose the jury comes back and says, Well, we find
25 against RJR but we don't find against -- you know,

673

1 your client, then what do we do, you know?
2 MR. ROSENBERG: Well --
3 THE COURT: I don't know because I
4 haven't heard the testimony. It's a little
5 difficult for me.
6 MR. ROSENBERG: All we're talking
7 about are the evidentiary objections. Obviously we
8 can and we will then. Just if RJR stands up and
9 objects I'll stand up and say I object also. But
10 you won't hear any single objection that won't be
11 shared by the parties.
12 THE COURT: I guess my question is I
13 can understand where RJR's -- since the document --
14 the document we're referring to is 37102, RJR
15 research and development, but other than RJR who
16 claims that same -- that same right?
17 MR. ROSENBERG: We're talking about
18 the prejudicial value of that document outweighing
19 its probative impact.
20 MR. BIERSTEKER: And other problems
21 but, yes. Not -- not what you're thinking, Judge.
22 I've given that up.
23 THE COURT: Well, you know, Jones,
24 Day as I recall it was representing -- back in the
25 '80s was counsel for RJR, right?

674

1 MR. ROSENBERG: That's right.
2 MR. BIERSTEKER: That's correct.
3 THE COURT: So if -- I don't know
4 which particular document but I'm assuming you're
5 giving me the whole -- I mean, you've got them
6 tabbed here but in toto of 37102, correct?
7 MR. PATRICK: That's the totality of
8 that document.
9 THE COURT: Okay. So I guess the
10 problem I'm having is other than RJR claiming these
11 were our attorneys, this was something that our
12 attorneys prepared internally whether in
13 anticipation of trial or not -- even though I made
14 that a moot point from the previous ruling in 1998
15 and I can -- 403 is another issue but how does
16 anyone else have an objection on that other than
17 Jones, Day?
18 MR. ROSENBERG: Then is he not
19 bringing in this document against Philip Morris?
20 THE COURT: I don't know. That's
21 what I'm trying to ask.
22 MR. ROSENBERG: Then we would want a
23 limine instruction on it, I guess.

24 THE COURT: You see, the way you've
25 written up the questions -- and I'm referring to the
675

1 Interrogatory questions -- you're not saying -- this
2 is my 30-second cursory view of them this morning.
3 We'll discuss these afterwards, too.

4 You're not saying -- you have
5 questions as to Philip Morris and then you have a
6 separate set of questions -- well, actually on 5 you
7 have RJR and/or Philip Morris but then on your
8 verdict sheet you have them broken down Philip
9 Morris, Reynolds, Mehlman so I don't know. At what
10 point are you acting in concert? At what point are
11 you not acting in concert?

12 MR. ROSENBERG: I think what I'm
13 saying --

14 THE COURT: And I use in concert as a
15 term of art, not an implication.

16 MR. ROSENBERG: To the extent that
17 we're dealing with evidentiary objections other than
18 attorney-client which would be specific to the party --

19 THE COURT: Which is really part --

20 MR. ROSENBERG: -- which is part of
21 that and that would not and I could differentiate
22 that objection from RJR's but to the extent we're
23 talking about relevance, of 403, hearsay -- that
24 those are the sorts of objections that I'm talking
25 about. If Peter makes it he's making it on behalf
676

1 of me. If I make it I'm making it on behalf of
2 Peter.

3 THE COURT: Because, you see, it's a
4 little confusing to me again not having heard all
5 the evidence how the jury is supposed to distinguish
6 between the two and doesn't -- you know, doesn't
7 that raise a conflict? I mean, maybe it's not for
8 me to raise it but, you know, suppose I have --
9 suppose, you know, you ditto everything down the
10 line which is your right to do but the jury comes
11 back a hundred percent RJR and zero Philip Morris.

12 MR. ROSENBERG: It -- it is doubtful
13 under the facts as presented here that's going to
14 happen but obviously anything could happen. I mean,
15 obviously Peter and I are not going to duplicate
16 cross-examinations of witnesses. As a matter of
17 fact, he's going to do major cross-examinations.
18 I'm going to be quiet. I'm going to be doing major
19 cross-examinations and he'll be quiet and the
20 evidence that's adduced will be used by the jury in
21 the way they see fit.

22 THE COURT: Which is not uncommon
23 when you have multiple defendants, correct?

24 MR. ROSENBERG: Right.

25 THE COURT: What I'm worried about is --
677

1 and again because I haven't seen or heard the
2 specific testimony -- who did what research at what
3 time regarding design defect. I think failure to
4 warn may be a little global although I saw some
5 discussions yesterday that I think that may be
6 divergent also so, you know, I figured I might as
7 well just raise these concerns now before I have to
8 do it later on.

9 MR. ROSENBERG: Yeah. We're not
10 ruling out the possibility that when the jury looks
11 at ultimate liability issues there's some
12 possibility that there's going to be a difference in
13 terms of their perspective of the two parties. What
14 I'm saying is that in terms of basic relevance,
15 hearsay, rule 403 objections and objections by one
16 is an objection by all.

17 THE COURT: Okay. I don't have a
18 problem with that just as long as we have that
19 understanding now on the record because I'm really a
20 little worried about how some of the testimony is
21 going to come in. I don't know what the plaintiffs
22 are asserting. I don't know if they're asserting a
23 later time period for one as opposed to the other.
24 I mean, I don't know.

25 MR. ROSENBERG: And Charles can

678

1 correct me but the testimony --

2 THE COURT: Otherwise, it would be
3 the same operative facts, Ezra, on these issues and
4 I think we've already had that ruling.

5 MR. ROSENBERG: The testimony from
6 Dr. Mehlman is going to be that he has no idea when
7 she smoked Marlboro, when she smoked Camel.

8 THE COURT: It's not just Mr.
9 Mehlman. Suppose -- I don't want to wildly
10 speculate but suppose research by RJR took place ten
11 years before Philip Morris's research and there were
12 or were not documents that were there that could
13 have or should have been helpful that one had that
14 the other didn't have. I mean, that may make a
15 difference in a jury's mind. I don't know.

16 MR. ROSENBERG: Sure, and that's
17 certainly a possibility.

18 THE COURT: Just a thought.

19 All right. So you want me to go
20 through each of these pages individually then? Is
21 that what you're going --

22 MR. BIERSTEKER: They have not told
23 me which portions they're going to use. I don't
24 know but I do have an objection to the document
25 being used. I know one portion was identified

679

1 potentially to be used in opening and that's the
2 only specific portion I can address because that's
3 the only one that's been identified to me.

4 THE COURT: Well, my understanding is
5 that you worked out what was in openings, correct?
6 That was my understanding.

7 MR. BIERSTEKER: And it was withdrawn
8 when the issue was raised so it wasn't used but
9 that's the only portion I think they might use and
10 I'm prepared to address that particular portion --

11 THE COURT: Is there a particular
12 page you want to address me to?

13 MR. PATRICK: And that's fine.
14 That's a good representative area of that document.

15 MR. BIERSTEKER: It's Page 57 and 58
16 at the bottom. Talking about the 1957 Tiegue
17 literature survey, Your Honor.

18 THE COURT: Yes.

19 MR. BIERSTEKER: All right. The

20 first clause, in approximately 1953 Dr. Tiegue
21 reviewed the smoking and health literature. That's
22 fine. That just comes straight out of the document
23 and they can use the document for that. They don't
24 have to use this particular memorandum.

25 And then, Was surprised by the volume
680

1 of material which indicted cigarette smoking. Okay.
2 Now, that's a hearsay within a hearsay problem. I
3 think the whole document is hearsay but I think it's
4 also a hearsay within the hearsay problem because
5 the footnote is to an interview that Dr. Tiegue
6 conducted with attorneys at Jones, Day.

7 THE COURT: I wouldn't know that
8 because the footnote in and of itself says
9 interviewed Dr. Tiegue May 3rd, 1985.

10 MR. BIERSTEKER: That's what it is,
11 Your Honor. It's an interview with --

12 THE COURT: I'm not disbelieving.
13 I'm just saying it's hard to tell from here. When
14 you -- this is not at deposition?

15 MR. BIERSTEKER: No, it wasn't.

16 THE COURT: This was RJR's attorneys
17 interviewing Dr. Tiegue in what format?

18 MR. BIERSTEKER: What do you mean in
19 what format? I don't understand.

20 THE COURT: At their offices, in --
21 you know.

22 MR. BIERSTEKER: Oh, it was --

23 THE COURT: Prior to --

24 MR. BIERSTEKER: It was at the
25 offices of Reynolds, yes, Your Honor.

681

1 THE COURT: Okay.

2 MR. BIERSTEKER: And so the fact --
3 so we got a hearsay problem as to -- as I say I
4 think we've got it for the whole document but we
5 have hearsay within hearsay as to the expression of
6 surprise.

7 THE COURT: Mm'mm.

8 MR. BIERSTEKER: And not only that, I
9 don't see how Dr. Tiegue's surprise or lack thereof
10 in 1953 really has a lot to do with this particular
11 case. Okay. We continue on.

12 Dr. Tiegue prepared a report in which
13 he concluded that there was significant literature
14 of which RJRT must be aware and he recommended that
15 RJRT monitor and respond to this literature and the
16 footnote refers to the document he prepared at the
17 time. I don't know -- I don't have any problem with
18 the document he prepared at the time. They don't
19 need this document to prove that. That's what the
20 document says. Okay. But then the next bit.

21 According to Dr. Tiegue the law
22 department advised -- so now we've got two levels of
23 hearsay because again we're talking about his
24 interview.

25 THE COURT: Mm'mm.

682

1 MR. BIERSTEKER: The law department
2 advised that this report should not be circulated so
3 we've got triple hearsay here and I don't see how
4 anything the law department may or may not have said

5 to Dr. Tiegue at the time is particularly pertinent
6 about how widely his memorandum should be circulated
7 internally at the Reynolds.

8 Finally the last sentence. Although
9 copies of this report exist he believes that Henry
10 Ramm advised that the report be collected and
11 destroyed. Again, we've got hearsay, multiple
12 levels of hearsay here and the truth is whatever Dr.
13 Tiegue believes Henry Ramm might have advised, the
14 document exists so we've got a real prejudicial
15 problem with them trying to introduce evidence that
16 this thing was supposed to be destroyed when we've
17 got the document. It wasn't destroyed. It's right
18 here in living color and so this is an example I
19 think of the hearsay problems that infuse this
20 document, it's an example I think of the prejudice
21 problems that infuse this document and I really do
22 believe to the extent that this is lawyer's
23 commentary on the evidence and the lawyer's analysis
24 of what the evidence is that this is inappropriate.

25 We did do a brief on this, Your

683

1 Honor, and it was in our opening brief on these
2 issues but there's a whole line of cases holding
3 that lawyer assessment of the facts just isn't
4 admissible. In fact, there's a New Jersey rule,
5 Rule Of Professional Conduct, 3.4E I believe, that
6 actually expressly prohibits lawyers from asserting
7 personal knowledge of the facts and that's really
8 what's going on. It's the Jones, Day lawyers
9 expressing knowledge of the facts in a document
10 that's intended to help them so I'm not even sure
11 it's competent to start with.

12 THE COURT: Okay.

13 MR. BIERSTEKER: Those are my
14 arguments.

15 THE COURT: I get it.

16 MR. ROSENBERG: And we join in that.

17 MR. MIGLIORI: I point out he has a
18 Jones, Day pad on his lap.

19 MR. BIERSTEKER: It's wishful
20 fulfillment.

21 THE COURT: I think this concert can
22 break up real quickly.

23 MR. PATRICK: Your Honor, just to be
24 brief, under New Jersey Rule of Evidence 803 they're
25 authorized admissions. First of all, Jones, Day was

684

1 authorized by RJR to do this survey of the agents,
2 executive officers of R.J. Reynolds so at every
3 level to -- on those statements to which he asserts
4 hearsay they would be either admissions or
5 authorized admissions so that there is no hearsay
6 problem with this document as we see it because
7 they're all statements of -- either the agents of
8 the party or the party itself --

9 THE COURT: Just refresh my
10 recollection for the record Dr. Tiegue's position at
11 the time from 19 -- well, prior to 1985.

12 MR. PATRICK: He was the organic
13 chemist that we discussed yesterday. He's the -- I
14 believe was director of research -- I could be
15 corrected. I know he came -- director of chemical

16 research I think was his exact --
17 MR. BIERSTEKER: Part of the
18 subdivisions.
19 MR. PATRICK: -- his exact title. He
20 received his Ph.D. I believe in 1950 and joined the
21 company in the early 1950s.
22 THE COURT: I'm sorry. Go ahead. Go
23 ahead. No. Please.
24 MR. BIERSTEKER: No. But some of
25 these -- I mean, we're focusing on a specific

685

1 passage right now but I did --
2 THE COURT: You asked me to.
3 MR. BIERSTEKER: I did. I did. And
4 I don't know the others but I would say that many of
5 the people who were interviewed in order to put this
6 document together did not have high managerial
7 positions and many of them were former employees and
8 I also wanted to note because I had forgotten that
9 Judge Weinstein twice agreeing with Your Honor as to
10 the Bilolli waiver issue --

11 THE COURT: Oh, really?

12 MR. BIERSTEKER: Nonetheless twice
13 agreed with the admissibility issue -- on the
14 admissibility issue.

15 THE COURT: Here's the problem I have
16 and it's not special to tobacco.

17 Many a times we see corporations with
18 attorneys that act at the direction of the
19 corporation to undertake certain tasks. One of the
20 reasons the attorney-client privilege has and is --
21 eroded across this country is because it's been
22 abused. It's been abused because the actions taken
23 by the attorneys go well beyond the traditional in
24 preparation of litigation or on notice in litigation
25 and we had this originally coming up in the silicone

686

1 breast implant case.

2 We had -- not only did we have the
3 attorneys who were trying the case, we had the
4 attorneys who were trying the case lobbying before
5 Congress and acted at the direction of the
6 corporation doing jobs that were not traditional
7 litigation jobs so that every time a document came
8 up it was, Oh, this is privileged, and I believe the
9 literature although, of course, we have such erudite
10 scholars in this profession that everyone has an
11 opinion both ways but there is a body of literature
12 which I discovered when we were doing silicone
13 breast implants that specifically said that one of
14 the reasons the attorney privilege was being eroded
15 is because attorneys are acting as agents of the
16 corporation as if they were other employees rather
17 than acting as attorneys in preparation for
18 litigation and that's where the privilege comes in
19 so I don't accept as an overall principle just
20 because an attorney is doing something for a
21 corporation, okay, that they are necessarily not
22 authorized to do it, directed to do it, acting as an
23 agent for the corporation and those really have to
24 be looked at closely.

25 MR. BIERSTEKER: And if I might

687

1 respond to that.

2 When we submitted the motion with
3 Your Honor we submitted an affidavit from my
4 partner, Mr. McDermott, who was heading the R and D
5 team and I don't have the affidavit in front of me
6 but I was also there at the time so I remember a lot
7 of this.

8 In 1985 --

9 THE COURT: Respectfully here's
10 exactly the problem now.

11 MR. BIERSTEKER: What --

12 THE COURT: I don't mean you
13 personally but you come in and testify, okay, about
14 what your instructions were -- wait. No. If I can
15 finish?

16 MR. BIERSTEKER: Sure.

17 THE COURT: Well, let me not finish.
18 You go ahead.

19 MR. BIERSTEKER: No.

20 THE COURT: No, no. I insist.

21 MR. BIERSTEKER: In 1985 Jones, Day
22 was first retained by R.J. Reynolds Tobacco Company
23 and it was in April of 1985, in fact, and a number
24 of folks went down because they had millions of
25 pages of documents that nobody really had reviewed.

688

1 There was active litigation pending. In fact, there
2 was a trial in California that was tried within a
3 matter of a few months after we were first retained
4 and we said we got to get our arms around all of
5 this paper and we went down and we reviewed the
6 paper. There were cases pending in New Jersey.
7 Just in California -- the Galbraith trial. That's
8 the trial that went in California. A number of
9 cases and this -- this document was prepared
10 precisely within the traditional role that attorneys
11 have. It was not done for any lobbying or any other
12 kind of purpose. It was done to enable us to
13 assemble the facts, to synthesize them to, analyze
14 them and to prepare a defense.

15 THE COURT: Well -- and I can
16 appreciate that. My comments were meant in an
17 overall historical context of what I think we all
18 clearly recognize is a great eroding of the
19 attorney-client privilege. Am I correct?

20 MR. BIERSTEKER: You're correct, Your
21 Honor.

22 THE COURT: And I believe one of the
23 reasons for that is because corporations at times --
24 and only because I'm familiar with this in a
25 corporate setting, not corporations -- are not the

689

1 only ones who do this but in the context of my
2 research which came out of the cases before me I
3 have found that and that's why if you check your pro
4 hac vice list that was one of our issues, okay? So
5 while that, in fact, may be true the problem now
6 becomes -- this is why it's a little unique to
7 tobacco.

8 You have these confidential documents
9 in 1985 which Congress really didn't care about and
10 decided to do what they did, different branch of the
11 government. I don't have control over that. The

12 history is well on the record and memorialized in
13 quite a number of cites across the country. So I'm
14 not worried about whether or not the privilege
15 exists in that traditional sense. That's a moot
16 point in issue.

17 Now, the content of the particular
18 document, privileged aside, public domain aside,
19 still has to pass a general test, A, of relevancy
20 and, B, are we, in fact, getting into something that
21 may be multiple hearsay.

22 As I understand your argument your
23 argument is he was an employee.

24 MR. PATRICK: Correct.

25 THE COURT: The attorneys were acting
690

1 at the direction of the corporation.

2 MR. PATRICK: That's correct.

3 THE COURT: What his understanding or
4 impression was is admissible because that's the
5 hearsay exception of an employee. This wasn't while
6 not as high up as Wakeham --

7 MR. ROSENBERG: I don't know.
8 Probably not.

9 MR. PATRICK: No. He wasn't.

10 MR. BIERSTEKER: He was not.

11 THE COURT: He nonetheless was not as
12 lower an authority as, you know, a person who gets
13 coffee in the morning so I think that's a
14 distinction.

15 At what level do we say one acts at
16 the direction of the corporation or one is in a
17 position to make a decision is really what's at
18 issue here, correct?

19 MR. BIERSTEKER: In part, yes.

20 THE COURT: Okay. Well, in the
21 totality of just that context we were speaking of.

22 MR. BIERSTEKER: Yes, but I mean I
23 think even as to the statements authored by the
24 Jones, Day attorneys --

25 THE COURT: Mm'mm.

691

1 MR. BIERSTEKER: Yeah, we were
2 authorized to represent the client and to undertake
3 a review of the documentary evidence and to
4 interview people to try to prepare a defense.

5 THE COURT: Right.

6 MR. BIERSTEKER: That's true. But I
7 think there are a long line of cases. They're at
8 Page 12 to 14 of the original brief that we filed on
9 this matter --

10 THE COURT: Mm'mm.

11 MR. BIERSTEKER: -- that out-of court
12 statements by an attorney are not binding on a party
13 unless the statements relate specifically to the
14 management of the litigation or they are both
15 authorized and authorized to be made public and
16 there's a number of cases we cited but they don't
17 fulfill -- they do not meet that test here.

18 THE COURT: This actually fits in
19 between this, doesn't it? These are actions that
20 were authorized. They certainly were not to be made
21 public but they, in fact, were made public by no --
22 no actions of judiciary -- of a judiciary. They

23 were put into the public domain going back again
24 through Congress, going back through it being
25 through the Internet, going back through it being

692

1 published, going back through Congressional waiver
2 so if those intervening acts had not come in or had
3 not taken place then I think you're in a much more
4 solid position.

5 I don't think this is -- to continue
6 with your basketball analogy -- a slam dunk either
7 way but I think it's a very unique area in the law.

8 Clearly you're correct on the citing
9 of your reference to the New Jersey rule nor do I
10 remember the series of New Jersey cases something
11 that even approached the magnitude of constitutional
12 testing of the Congress versus the judiciary system
13 and subsequent actions.

14 There was I believe in my opinion a
15 reference to one or two New Jersey cases about -- it
16 was a shore town, public hearings and matters within
17 public hearings.

18 MR. MIGLIORI: I got it.

19 THE COURT: Yes, you got it? This is
20 really taxing the total depths of my mind here.

21 Can I just get this reference point
22 because I just want to finish my point.

23 MR. BIERSTEKER: I'm sorry.

24 MR. MIGLIORI: Atlantic City --

25 THE COURT: Yes.

693

1 MR. MIGLIORI: Atlantic City. I
2 believe this is what you're referring to.

3 THE COURT: Thank you. Pretty good,
4 huh?

5 The case I had cited in my opinion
6 '88 or '98 was Atlantic City Convention Center
7 Authority versus South Jersey Publishing Company
8 which was 1994 Supreme Court case 135 NJ 53. At
9 that time the Court dealt with issues of statutory
10 common law rights of third parties to obtain audios
11 in public meetings.

12 Justice O'Hearn who just retired last
13 year stated that audio tapes prepared to serve a
14 memorial of something said or done by a public
15 officer or as memorial public proceedings or public
16 business should be considered a public record under
17 common law, and 801E was, in fact, cited by the
18 Court as well as NJS
19 2A 84A et seq.

20 Justice Stein who still is on the
21 Court observed that a popular government without
22 popular information or means of acquiring it is but
23 a prologue to a farce or tragedy or perhaps both at
24 65.

25 In other words, the -- and these were

694

1 the two leading cases in the area so while we may
2 have a plethora of Federal cases clearly New Jersey
3 has not dealt with this before and I would think
4 that even in the areas where this issue has come up
5 in other tobacco cases maybe with the exception of
6 the D.C. Circuit or something -- I don't know -- I
7 think it's going to be very unique so that the

8 traditional cases that would come down solidly one
9 way or the other are not necessarily totally
10 persuasive on this Court.
11 Of course, also coming out of the
12 Dewey opinion is Justice Clifford's reminder to us
13 that while Federal decisions can be helpful, they
14 certainly are not binding on the Court -- that is,
15 lower court Federal decisions. U.S. Supreme Court,
16 we all listen to that. So while I always accept and
17 read Federal Court decisions one of the problems
18 that we have here is I think we've got that
19 conflict, tension between the two rules.
20 MR. BIERSTEKER: There are three
21 cases from New Jersey, though, that we did cite.
22 One was Teresco Enterprises, 239 New Jersey Super at
23 123, Law Division, 1989.
24 THE COURT: Can you just turn around?
25 It's right there.

695

1 MR. BIERSTEKER: Sure. 239.
2 It's right in back of the court
3 reporter.
4 MR. BIERSTEKER: Okay. I should have
5 figured this out. It's been awhile since I've been
6 in a law library.
7 239, 133 and the jump cite is 129.
8 THE COURT: This is a Law Division
9 case.
10 MR. BIERSTEKER: Yes, Your Honor. I
11 thought I said that.
12 MR. ROSENBERG: Which we respect.
13 THE COURT: By Menza. Go ahead.
14 MR. BIERSTEKER: They were having
15 settlement negotiations and counsel for the
16 plaintiff basically said, in effect, that his client
17 had no case and settlement didn't work out, they
18 went to trial and they tried to introduce the
19 statement of the attorney that the plaintiff had no
20 case.
21 Now, the statement was excluded not
22 because -- not because it arose in the context of
23 settlement but because even though counsel was
24 authorized to represent his client in settlement
25 negotiations he did not have authorization to make

696

1 the specific statement that he made and that they
2 were trying to introduce.
3 We got much the same situation here I
4 think. I think. No. Where --
5 THE COURT: Other than it being in
6 New Jersey tell me how.
7 MR. BIERSTEKER: Well, Reynolds was
8 authorized to represent Reynolds (sic) and to
9 prepare a litigation defense. No specific statement
10 in -- in this research and development memorandum
11 was authorized by anybody.
12 THE COURT: Right?
13 MR. BIERSTEKER: And it was excluded
14 on hearsay grounds. The State v. Williams, 46 New
15 Jersey Super 98, Law Division, 1957.
16 THE COURT: If you would pivot to the
17 left.
18 MR. BIERSTEKER: 46.

19 MR. ROSENBERG: New Jersey Super you
20 said? It's all the way on the --
21 THE COURT: Oh, New Jersey Super.
22 MR. ROSENBERG: Top shelf all the way
23 to your right.
24 (Pause.)
25 THE COURT: All right. Tell me again
697

1 the cite.
2 MR. BIERSTEKER: 46 New Jersey Super
3 98 Law Division 1957.
4 MR. ROSENBERG: Which Judge?
5 THE COURT: Foley.
6 MR. BIERSTEKER: And in that case the
7 defendant in a criminal matter was seeking bail and
8 he submitted an attorney -- excuse me -- an
9 affidavit from his attorney in support of his
10 petition for bail and it was denied because the
11 affidavit from the attorney was hearsay as to the
12 circumstances giving rise to the offense, alleged
13 offense, and again it's not on all fours, I'll
14 admit, but I think it's pretty close.
15 THE COURT: Well, see, that's -- the
16 issue is -- is all fours.
17 This Judge Menza decision in 1989 is
18 really part of the public policy that New Jersey has
19 stood on as reemphasized by former Justice Garibaldi
20 about settlement being a high public policy within
21 the State. The squib he refers specifically to the
22 admission of a fact by an attorney during the course
23 of settlement negotiation was not admissible against
24 the client. Well, sure. There's a high public
25 policy on that. It's been -- if it hasn't been
698

1 reinforced before, it is -- let me just finish the
2 paragraph. Statement of fact made during settlement
3 negotiations are not admissible statements made by
4 an attorney was not made within the authority given
5 to him by the client.
6 Now, I understand it's not totally in
7 a positive -- you know, I don't want you to think
8 that -- that, you know, just -- just really teasing
9 you when I say just because it's in the State of New
10 Jersey but -- but that's -- see, the issue here is
11 much more troublesome.

12 The issue here is troublesome because
13 I still think it falls within that whole issue of
14 how far does the direction go and I think that's
15 been a big problem in a lot of these cases where the
16 defendant's actions aren't just, you know, locally.
17 It could be nationally and the effects have a great
18 effect so that when litigation comes clearly all is
19 marshalled. Some of it is relative -- some of it is
20 within relevant privilege. Some of it is not.
21 That's why in most cases we go to resort to the
22 privilege log and have it reviewed beforehand like a
23 privilege log; beforehand.

24 MR. ROSENBERG: But, Judge, if I may --
25 THE COURT: Yes.

699

1 MR. ROSENBERG: -- that --
2 THE COURT: Can I just say this?
3 Do you have to necessarily introduce

4 this document in this morning?
5 MR. PATRICK: No, Your Honor.
6 THE COURT: Okay. Let me just get
7 the ball going here because it's 9:30 already. You
8 can make your references. I'll read over the brief
9 again tonight, okay? Hold off on moving it into
10 evidence --
11 MR. HAEFELE: Certainly.
12 THE COURT: -- but be mindful that
13 that's the issue and if you want to supplement this
14 for me because we have nothing else to do by Friday
15 but if you want to supplement it by four o'clock on
16 Friday I'd really like to talk about those specific
17 issues. Please don't make it anything over three or
18 four pages, okay, really, because I've got the pound
19 and a half you gave me before but I --
20 MR. HAEFELE: That's fine. We'll be
21 happy to do that.
22 THE COURT: I think the problem is
23 we've got that ten -- you've got the overall eroding
24 plus the tension that's coming into tobacco because
25 it's such a unique issue of how it came about, okay?

700

1 MR. BIERSTEKER: Thank you.
2 THE COURT: Okay.
3 MR. BIERSTEKER: Actually, Charles,
4 if -- in order to focus any supplemental submission
5 we might make it would be helpful to know --
6 THE COURT: What the designations
7 are.
8 MR. BIERSTEKER: -- which portions he
9 was thinking of using.
10 THE COURT: That would be like open
11 discovery, wouldn't it?
12 MR. BIERSTEKER: Well...
13 THE COURT: Mr. Patrick, we really
14 like that rule here in New Jersey.
15 MR. PATRICK: I'm --
16 THE COURT: You're laughing now but
17 you may be crying by Friday.
18 MR. PATRICK: No. I've come to learn
19 that. I'm learning the hard way.
20 MR. BIERSTEKER: You just tell me
21 what page numbers to look at.
22 MR. PATRICK: Okay. I'll do that.
23 MR. BIERSTEKER: We can do that after
24 lunch or during lunch.
25 MR. PATRICK: Why don't we do it

701

1 during lunch?
2 MR. ROSENBERG: Just to return to the
3 objection issue, when we talk about it in terms of
4 evidence, again, if Peter's going to be the person
5 primarily responsible for Burns if he objects to
6 questions as leading, hearsay, that takes -- that
7 takes as an objection by me also.
8 THE COURT: Absolutely. And I
9 appreciate the heads up on that. I'm just a little
10 concerned about that other issue.
11 MR. ROSENBERG: Right.
12 THE COURT: And I don't want it to be
13 unclear on the record.
14 MR. ROSENBERG: And I think that the

15 best way to do it is to the extent that there is
16 ever any objection that really is directed on behalf
17 of one person such as attorney-client privilege the
18 party will make it and specify it's for that party;
19 otherwise, the objections would be deemed for all
20 parties? Is that fair?

21 MR. BIERSTEKER: That's fine.

22 THE COURT: I can live with that.

23 MR. PATRICK: That's fine with us.

24 THE COURT: Okay.

25 MR. BIERSTEKER: Thank you, Your

702

1 Honor.

2 THE COURT: Let's do business.

3 (9:34 a.m.)

4 (The following takes place in open
5 Court at 9:40 a.m.)

6 THE COURT: Thank you. Good morning.
7 Please be seated. Al is getting our jury. I trust
8 everyone's well.

9 MR. CLARK: Thank you, Judge.

10 THE COURT: I'd just like to make
11 some general comments for those who are in
12 observance.

13 Obviously this is an open courtroom.
14 Anyone in the public is allowed here any time. If
15 you are a member of the press, however, it is
16 required that you wear a press pass so if there are
17 or I'll make this announcement several times. If
18 you do not have one, talk to your editor about one.
19 I'm sure they can spring for one; otherwise, get a
20 visitor's pass from the Sheriff's Department, have
21 it marked Press. All right.

22 Again, this morning I met with
23 counsel in chambers and it is on transcription.
24 Thank you very much. And I appreciate counsel's
25 consideration in timely meeting with me so that we

703

1 have the jury's time in the box.

2 (At this time the jury enters the
3 Court room at 9:42 a.m.)

4 THE COURT: All right. Thank you.
5 All be seated.

6 Ladies and gentlemen, we -- good
7 morning. You're appreciative of the second terrific
8 day I ordered up today. I don't know how much my
9 luck can hold. I saw some of you walking around
10 this morning. I saw Mr. Scivani walking up and I'm
11 beeping my horn and he's taking in the fresh air so
12 that was good.

13 Thank you again. You all look
14 comfortable which is good. As you can see the
15 temperature somewhat fluctuates in this Courtroom so
16 we are down to a cooler temperature and again, Mr.
17 Clark, I'm going to leave it up to you if you feel
18 you're going to need an additional fan up there just
19 let me know this afternoon. We'll be glad to
20 provide it, okay?

21 Try to put it in the back, try to
22 have it forward.

23 All right. This morning we are going
24 to begin the plaintiff's case. We are going to
25 start with a witness and we will begin the evidence

1 in this matter. We are going to have a live
2 witness. The witness will be sitting in the witness
3 stand.

4 If at any time you are unable to see
5 the witness once the gentleman takes the stand
6 please raise your hand, tell me immediately. We
7 will adjust the screens. My perspective may be a
8 little different from yours and I'm just not sure.
9 I think probably Miss McGriff, you're probably the
10 most likely. If it is, just raise your hand and
11 we'll have the screen adjusted, okay?

12 Counsels may be using the screen
13 during the process so I want to make sure you have
14 an unobstructed view at all times of witnesses that
15 are here as well as the screen if any presentations
16 are being made to you, all right? Yes? Yes, my
17 jury?

18 THE JURY: Yes.

19 THE COURT: This is a sound recording.
20 I have to have some sound back here.

21 All right. Very good.

22 Ladies and gentlemen, are we ready to
23 begin?

24 MR. PATRICK: The plaintiff is ready,
25 Your Honor.
Burns - direct/Patrick

705

1 MR. BIERSTEKER: Yes.

2 THE COURT: Thank you.

3 Plaintiff, first witness.

4 MR. PATRICK: Thank you, Your Honor.
5 Your Honor, we call as our first witness Dr. David
6 Burns.

7 THE COURT: Dr. Burns, come on up,
8 sir. May we have the oath administered, please.
9 D A V I D M I C H A E L B U R N S, M.D., having
10 been duly sworn, testifies as follows:

11 THE COURT: Sir, you have a seat.
12 Try to keep your voice up if you would.

13 THE WITNESS: Thank you. If I drift
14 off give me an indication. I tend to tail off at
15 the end of sentences I'm afraid.

16 THE COURT: Not a problem.

17 DIRECT EXAMINATION BY MR. PATRICK:

18 Q. Good morning, Dr. Burns.

19 A. Good morning.

20 Q. Dr. Burns, can you see the jury? I'm
21 just concerned about the view.

22 A. Yes.

23 Q. Okay. Good.

24 Dr. Burns, where do you live?

25 A. I currently live in [DELETED]

Burns - direct/Patrick

706

1 Q. And what is your occupation?
2 A. I'm a physician and professor of

3 medicine at the University of California San Diego
4 Medical Center.

5 Q. You say a physician. Are you a
6 medical doctor?

7 A. Yes.

8 Q. Dr. Burns, was there ever a time that
9 you had any participation or involvement in drafting
10

11 Surgeon General's reports?
12 A. Yes. I've had an extensive
13 involvement with the Surgeon General's reports
14 dating back to 1975.
15 Q. Dr. Burns, if you would tell us a
16 little bit about yourself. Where did you go to
17 medical school?
18 A. I got -- received my Doctorate in
19 medicine from Harvard Medical School. Prior to that
20 I attended Boston College and grew up in the Boston
21 area. I trained in internal medicine at Boston City
22 Hospital and subsequently spent two years in the
23 public health service at the National Clearing
24 House. Following that I went to San Diego to train
25 for three years in chest medicine in pulmonary
Burns - direct/Patrick 707
1 disease, lung disease, and also in critical care
2 medicine and then joined the faculty at the
3 University of California in 1979.
4 Q. Are you specialized in any area of
5 medicine?
6 A. Yes. I specialize in internal
7 medicine, in pulmonary medicine, diseases of the
8 chest and I have a certificate of special
9 accomplishment in critical care management.
10 Q. Let's step back. You said internal
11 medicine. What is internal medicine?
12 A. Broadly, medicine defines itself into
13 several areas. Surgery, where you operate on
14 people, medicine where you use medication and
15 diagnoses and don't operate on people and then, of
16 course, pediatrics, obstetrics and then the
17 diagnostic specialties, pathology, radiology, so
18 internal medicine is really the study of all
19 diseases, their diagnosis and management but it
20 limits itself to the nonsurgical management of those
21 diseases.
22 Q. And what is pulmonary medicine?
23 A. When you complete your training
24 generally in medicine you can then specialize in one
25 area of the body; heart disease, cardiology, kidney
Burns - direct/Patrick 708
1 disease, renal medicine or in my case lung disease
2 which is called pulmonary medicine and what you do
3 then is to spend extra time in training specializing
4 in looking at the problems that occur with lung
5 disease and you look at not only the common problems
6 but some of the more uncommon as well so you become
7 more expert in making a diagnosis in matching those
8 particular problems.
9 Q. As a pulmonary physician are you --
10 issues pertaining to diseases such as lung cancer
11 come up in your practice?
12 A. Certainly. The two principal
13 diseases that you see unfortunately as a pulmonary
14 physician are lung cancer and chronic obstructive
15 lung disease, emphysema, chronic bronchitis.
16 Q. Now, are there any tests that you
17 have to take or any certifications you can get which
18 acknowledge your specialty either in internal
19 medicine or pulmonary medicine?
20 A. Yes. At each of those stages after
21 completing a required set of training, with training

22 specified, you're then allowed to sit for a Board
23 certification examination and I've completed those
24 examinations in internal medicine, in pulmonary
25 medicine and also in critical care medicine.

Burns - direct/Patrick 709

1 Q. Where do you practice now?

2 A. I practice at the University of
3 California San Diego Medical Center.

4 Q. And what is your position?

5 A. I am a professor of medicine and I'm
6 a staff physician at the U.S. SD Medical Center.

7 Q. Was there a time at the University of
8 San Diego that you had involvement in the pulmonary
9 disease unit?

10 A. Yes. I'm currently a -- my position
11 within the University is within the division of
12 pulmonary and critical care medicine and that's the
13 organization unit that I belong to. During much of
14 my early career, the first 15 years or so, I spent
15 approximately half my time on internal medicine,
16 critical care issues and in particular I ran the
17 respiratory therapy section for the medical center.

18 Respiratory therapy is that part of
19 the hospital which delivers treatments, manages the
20 ventilation, provides oxygen and medications to open
21 up the airways so I was responsible for the delivery
22 of all of those treatments within the medical
23 center.

24 Q. And have you written in that area,
25 that area of pulmonary medicine?

Burns - direct/Patrick 710

1 A. Oh, yes, certainly.

2 Q. And have those writings been
3 published?

4 A. Yes, yes.

5 Q. Now, you mentioned the Surgeon
6 General.

7 A. Right.

8 Q. When was it that you first had any
9 participation in the drafting or development of the
10 Surgeon General's report?

11 A. That participation began in 1975 --
12 THE COURT: Excuse me. Counsel,
13 you're holding up an item. You want to identify the
14 item?

15 Q. Well, Doctor, can you identify this
16 particular volume?

17 A. I can certainly identify that volume.
18 That is the 1964 report to the Surgeon General on
19 smoking and health. That annotates my time with the
20 Surgeon General just a bit but it was certainly one
21 of the defining volumes in that series.

22 THE COURT: Is there an ID number on
23 this?

24 Q. Doctor, we have the Surgeon General's
25 report marked as 50150.

Burns - direct/Patrick 711

1 MR. PATRICK: Your Honor, I believe
2 there's no objection and it's agreeable to be
3 offered.

4 MR. BIERSTEKER: That's correct, Your
5 Honor.

6 THE COURT: This is one of the

7 examples I used when I say what's the item number,
8 okay? Remember I said P-1, D-1. Because the
9 documents not here they've been given item numbers
10 so it will be broken down later for plaintiff and
11 defense. This is item number 50150. That's why
12 counsel's referring to that as they progress on both
13 sides during the trial, okay?

14 Go ahead.

15 BY MR. PATRICK:

16 Q. When was your involvement -- first
17 involvement with the Surgeon General's reports?

18 A. My first involvement was with the --
19 began in 1974 when I joined the office on smoking
20 and health and at that time it was called the
21 National Clearinghouse For Smoking and Health and it
22 resided at the Centers for Disease Control which are
23 now in Atlanta.

24 At that point I was a medical officer
25 and my responsibility was to draft and author the
Burns - direct/Patrick 712
1 1975 Surgeon General's report on smoking and health.

2 That report reviewed all of the
3 evidence that had come forward in the past year in
4 the entire world literature on smoking and health as
5 well as preparing a special chapter on the topic of
6 environmental tobacco smoking and health.

7 Q. Now, in the preparation of the 1975
8 Surgeon General's report what literature or what
9 resources did you look to?

10 A. One of the responsibilities of the
11 National Clearinghouse For Smoking and Health was to
12 be the institutional repository for everything that
13 they could get that had ever been written on tobacco
14 and health so they collected that information on a
15 steady, progressive basis. They had a contractor
16 who collected all of the information from medical
17 journals, who searched out other sources of
18 information and that information came in
19 periodically.

20 What the Surgeon General's report at
21 that time did was to take all of that literature for
22 a year -- and my recollection is that it was some 13
23 or 1400 scientific articles at that time -- my job
24 was to read through all of them, organize them into
25 a coherent set of chapters, draft those chapters and
Burns - direct/Patrick 713

1 then send them out for scientific review, make
2 changes based on that scientific review and then
3 send the entire volume out for scientific review as
4 a senior review process, received that information
5 back, again modified the volume and then it was
6 cleared by the -- each agency of the U.S. Public
7 Health Office and was submitted to Congress as the
8 official position of the U.S. Public Health Service
9 on tobacco control issues. It was mandated at that
10 time and still is -- it was mandated by law that the
11 Public Health Service provide this report to
12 Congress.

13 Q. Did representatives of the tobacco
14 industry have any input or ask to have any input in
15 the development of the Surgeon General's report in
16 1975?

17 A. Specifically in 1975 we did not make

18 any additional efforts to obtain information from
19 the tobacco companies other than those that we had
20 made -- that had been made in the past.
21 Traditionally those efforts had not been successful
22 and therefore we didn't repeat them each year. We
23 did attempt to get information from various
24 scientific presentations that had been made of
25 representatives of the tobacco industry but we were
Burns - direct/Patrick 714

1 unable to get anything other than documents that had
2 been presented in the media or in the scientific
3 press.

4 Q. Now, after the 1975 Surgeon General's
5 report did you have any involvement in subsequent
6 Surgeon General's reports that dealt with the
7 subject of smoking and health?

8 A. Yes. I've been an author, editor or
9 senior reviewer for every Surgeon General's report
10 that's been produced since 1975 including the one
11 that was released last week on the health
12 consequences for women.

13 Q. Now, just general in the preparations
14 of the Surgeon General's reports what information,
15 what specific types of information do you look to?

16 A. In general we look to obtain all of
17 the information that's available at a given time.
18 For the period of time between 1967 when they began
19 annual reports through the 1978 period the reports
20 tended to be reviews of one year's worth of
21 literature. Everything that was known or came to
22 light during that year plus we would have chapters
23 on specific topics, pipe and cigar smoking, other
24 kinds of topics like environmental smoking.

25 Beginning in 1979 the process changed
Burns - direct/Patrick 715
1 somewhat and became a comprehensive review of
2 everything that had ever been published on a given
3 topic.

4 In the 1979 report it was a
5 comprehensive volume that looked at everything that
6 was known up until that time covering the whole ball
7 field of smoking in various diseases. It was a
8 volume about 2500 pages in size. It was a
9 monumental effort.

10 Subsequent to that the reports
11 focused on specific topics.

12 The 1980 report was the health
13 consequences for women. The 1981 report looked at
14 the changing cigarette, changes in filtration and
15 low tar and nicotine cigarettes. The 1982 report
16 focused specifically on the disease consequence of
17 cancer. The 1983 report looked at heart disease,
18 cardiovascular diseases. '84 looked at chronic lung
19 disease. '85 looked at diseases that occur in the
20 workplace interacting with smoking particularly
21 chronic lung disease and cancer. The '86 report was
22 one on -- again on environmental tobacco smoke
23 exposure. In '88 the report covered addiction and
24 then in 1989 again the report looked at a larger
25 series of issues principally around what had
Burns - direct/Patrick 716

1 occurred over the 25-year interval from the first
2 Surgeon General's report in terms of changing

3 smoking behavior, in terms of a variety of other
4 aspects of the effort to control the damage in
5 response to tobacco.

6 Subsequent reports have dealt with a
7 variety of other issues where they -- they look
8 comprehensively at everything that is known on that
9 topic.

10 Q. Now, in the preparation of the
11 Surgeon General's report and specifically your
12 involvement has that been limited to, let's say,
13 editing a Surgeon General's report or have you had
14 involvement in the actual writing of the report?

15 A. Well, the -- the term that we have
16 used is scientific editor but you shouldn't confuse
17 that with the process of copy editing or checking
18 references or fixing up graphics so that they look
19 pretty.

20 Our job as scientific editors was to
21 insure the integrity of the science contained within
22 the document and perhaps I should explain how a
23 Surgeon General's report is prepared.

24 What we would do as editors is draft
25 an outline of how the chapters should discuss the
Burns - direct/Patrick 717
1 topic, what areas, what questions need to be
2 answered.

3 We would then divide that up amongst
4 a group of writers who were senior scientists
5 throughout the United States specifically
6 knowledgeable about those areas.

7 Those authors would send in a final
8 draft to us. Sometimes we would have a couple
9 meetings with them to help make sure that they were
10 moving along through preparation of that draft.

11 Once they submitted that draft to the
12 Surgeon General's office they never saw it again,
13 okay? From that point on it was the job of the
14 editor or editors to insure that the science was
15 accurate because this is not a document that
16 expresses the position of an individual author.
17 This is the official position of the U.S. Public
18 Health Service and the scientific community by proxy
19 on the issue of smoking and health and so a great
20 deal of peer review effort went into making sure
21 that that was actually the fact; that it actually
22 represented the consensus.

23 Those chapters were reviewed by the
24 editors. Oftentimes we had to rewrite sections of
25 them because they were either incomplete or made
Burns - direct/Patrick 718
1 statements that were not supported by the data
2 contained in the document.

3 They were then sent out to chapter
4 reviewers, other individuals who were specifically
5 knowledgeable on the area of that chapter all across
6 the United States. Those individuals are listed in
7 the front of each Surgeon General's report. Those
8 reviews would come back. The editors would
9 integrate the reviewers' comments into that chapter.
10 We would then put the whole volume together as a
11 single volume and send it out to a group of --
12 between ten and twenty or sometimes more individuals
13 who were broad in the knowledge about public health

14 particularly on tobacco issues. They were
15 specifically asked questions about does this
16 document reflect the scientific consensus, the
17 balance and tone of the document, does it include
18 all of the science that exists on this issue, is the --
19 are the conclusions drawn in the document based on
20 the science reported in the document.

21 Those comments once again would be
22 integrated by the editors and it would be submitted
23 formally to each agency of the U.S. Public Health
24 Service again for formal review. Those comments
25 would come back, again be integrated and then the
Burns - direct/Patrick 719

1 entire document was submitted for formal clearance
2 through the Centers For Disease Control, the Office
3 of the Surgeon General, the Office of the Assistant
4 Secretary of Health and the Office of the Secretary
5 of Health and Human Services.

6 At that point in time the document is
7 formally transmitted as the official position of the
8 U.S. Public Health Service to Congress on this
9 particular topic so there is an extensive
10 peer-reviewed process, and my job as an editor was
11 really to insure the integrity of the science, to
12 read the original literature on occasion, to rewrite
13 sections where the science had been either
14 misinterpreted or not completely described, to take
15 the scientific comments from the reviewers, look at
16 the original articles that they were based on and
17 then integrate those comments into the text to make
18 sure that the text itself reflected the science that
19 existed rather than the position of the individual
20 author.

21 Q. All right. Now, you said you read,
22 reviewed medical literature.

23 A. Yes.

24 Q. In the preparation of the Surgeon
25 General's reports that you discussed did you go back
Burns - direct/Patrick 720

1 and look at the historical medical literature that
2 may have existed on tobacco and disease?

3 A. Absolutely. We looked at a
4 comprehensive body of literature both in terms of
5 the history of tobacco use, history of prevalence,
6 changes in smoking behaviors over time as well as
7 the disease consequences that occur and the
8 scientific literature that establishes that those
9 disease consequences are caused by cigarette smoke.

10 Q. And where is that literature found?

11 A. The literature is found in the
12 general medical literature, it is found at the
13 Office On Smoking and Health in Maryland, archives
14 and occasionally it's found in various other sources
15 most recently from internal tobacco industry
16 documents that date back some 40 or 50 years.

17 Q. Now, does the Surgeon General -- let
18 me back up just a second.

19 What is the Surgeon General or who is
20 the Surgeon General in terms of a position?

21 A. That's often a confusing issue.

22 The Public Health Service is actually
23 a uniform branch. It is not Army but it's a uniform
24 branch so it is similar in constitution to the Army,

25 Navy and Air Force. As a result, it has a Surgeon
Burns - direct/Patrick 721
1 General. The Army, Navy and Air Force each have a
2 Surgeon General. They are the physician responsible
3 for all of the medical care delivered by the medical
4 officers in that branch of the service.

5 The Surgeon General is the individual
6 responsible for the performance of all of the
7 medical officers within the U.S. Public Health
8 Service and therefore he is the senior physician if
9 you will.

10 Because the Public Health Service is
11 responsible for the public health; that is, our
12 health and well-being for us, the entire country,
13 the Surgeon General that you commonly hear about is
14 the Surgeon General of the Public Health Service and
15 he as Dr. Coop -- Dr. C Everett Coop often described
16 himself, sort of the physician for the country in a
17 sense. He's the one that is responsible for looking
18 at and examining these complicated scientific and
19 medical issues.

20 Q. So when someone says this is the
21 Surgeon General's report, and this is 50150, is this
22 written by the Surgeon General, so to speak, or --

23 A. No. It really is not written by the
24 Surgeon General. It is written by the scientific
25 community of the United States. It is then reviewed
Burns - direct/Patrick 722

1 by a large segment of additional scientists across
2 the United States and it is an integrated and
3 prepared by the actual editors of the volume. It is
4 then submitted to the Surgeon General.

5 Q. Now, in your preparation of the
6 Surgeon General's reports since 1975 have you become
7 familiar with how the 1964 Surgeon General's report
8 was prepared?

9 A. Yes.

10 Q. And that is 50150.

11 A. Yes. I've been familiar with that in
12 quite some detail.

13 Q. Who was the Surgeon General in 1964?

14 A. I'm blanking on the name.

15 Q. Luke --

16 A. Luther Terry was the Surgeon General.
17 You caught me by surprise.

18 THE COURT: Stipulated?

19 MR. BIERSTEKER: Yes, Your Honor.

20 MR. ROSENBERG: Yes, Your Honor.

21 Q. And how is it that this particular
22 Surgeon General's report came to be?

23 A. That Surgeon General's report
24 represented an interesting innovation in the
25 relationships of government and science.

Burns - direct/Patrick 723

1 Prior to that time the scientific
2 community did its job, published the literature and
3 formed a consensus and the science went on.

4 In this instance there was such
5 tremendous opposition to the science, such
6 tremendous argument particularly from the tobacco
7 industry that President Kennedy felt an obligation
8 to define the science clearly; that is, to bring
9 together a consensus so that the government could

10 have an official position on this issue and what the
11 Surgeon General at that time did was to ask a group
12 of senior scientists across the United States to
13 come together. Those scientists were selected
14 because they had not expressed a public opinion on
15 whether cigarettes cause disease or not. That group
16 of scientists was prepared on a list and both the
17 tobacco industry and the voluntary health agencies,
18 Cancer Society, et cetera, were offered the
19 opportunity to veto anyone for any reason on that
20 list. That is to remove them from participation.
21 Neither side did but they were offered that
22 opportunity.

23 That group met and was presented all
24 of the scientific information, asked the tobacco
25 companies for information, asked the scientific
Burns - direct/Patrick 724

1 community for information and over the course of 13
2 months deliberated, worked very hard and prepared
3 that report which was distinct because it was a
4 report to the Surgeon General of an expert committee
5 rather than the subsequent reports which were
6 reports of the Surgeon General to Congress. That
7 report was then presented to the public and has been
8 a sort of landmark document in U.S. public health.

9 Q. Dr. Burns, have you written on
10 subjects other than tobacco and disease?

11 A. Certainly.

12 Q. And what would that be?

13 A. I have written on issues related to
14 bronchiolavage; that is, washing out the lungs of
15 individuals with a small tube placed into the
16 airway. I've also written on respiratory therapy
17 issues quite broadly particularly on cost control
18 and quality assurance issues related to respiratory
19 care. I have written on issues related to
20 respiratory muscle function; that is, the
21 relationship of the muscles that move your rib cage
22 and abdomen and help you breathe. Those muscles
23 play an important role in respiratory failure; that
24 is, the limitation of your ability to breathe that
25 leads you to be placed on mechanical ventilator and
Burns - direct/Patrick 725

1 have the machine breathe for you. When those
2 muscles tire out and exhaust that becomes an
3 important contributor to why you wind up on a
4 mechanical ventilator. I've written on that issue
5 and lectured extensively on that issue.

6 Q. Have you ever authored a chapter that
7 has appeared in a textbook?

8 A. I've authored multiple chapters in
9 textbooks, yes, including several on tobacco.

10 Q. Have you authored one that is -- of a
11 more general nature?

12 A. I'm not sure what you're asking.
13 I've certainly authored chapters in textbooks on
14 general lung disease issues. Is that what you're
15 referring to?

16 Q. Let me just put it this way: Are you
17 familiar with a textbook entitled Cecil's Textbook
18 of Medicine?

19 A. Yes.

20 Q. And did you participate by offering a

21 chapter for that textbook?
22 A. Yes. Cecil is one of the two
23 traditional classic medical school texts on internal
24 medicine. I've authored a chapter on cigarette
25 smoking in Cecil.

Burns - direct/Patrick 726

1 The other traditional text is
2 Harrison and I'm currently authoring a chapter in
3 that text on cigarette smoking as well.

4 Q. Now, in your practice have you had an
5 occasion to see patients --

6 A. Yes.

7 Q. -- with lung diseases such as lung
8 cancer?

9 A. Yes. I've seen patients with chronic
10 lung disease extensively as well as many patients
11 with lung cancer.

12 Q. Now, you're in court here today
13 testifying. Is this your first time testifying in
14 court?

15 A. No. Obviously -- I went back -- I
16 think this is the 18th time over the last 20 years
17 or so that I've testified in a tobacco case.

18 Q. And because of your role, your
19 involvement in the Surgeon General's reports have
20 you been asked to testify on multiple occasions?

21 A. Yes. I've been asked to testify far
22 more often than actually I could and specifically
23 I've been asked to testify by the Attorney General
24 of the United States as well as the Attorney General
25 of Canada in litigation brought against the tobacco

Burns - direct/Patrick 727
1 industry.

2 Q. And, in fact, has there come a time
3 when you've actually testified at the request of the
4 tobacco company?

5 A. Yes. Actually I've testified for the
6 Liggett Company during the damages phase of the
7 Anglo class action lawsuit. That testimony involved
8 the facts that -- the Liggett Company had acted
9 quite differently from other tobacco companies in
10 acknowledging the risk in placing addiction warning
11 labels on their packages to warn people about the
12 addiction and attempting to work with the public
13 health --

14 MR. BIERSTEKER: Your Honor, I object.
15 I think this was a subject of A motion in limine.

16 THE COURT: Right.

17 MR. PATRICK: We'll move on.

18 Your Honor, I guess at this time we
19 would offer Dr. Burns as an expert in the field of
20 pulmonary medicine and in public health as it
21 relates to issues concerning smoking and health.

22 THE COURT: Thank you.

23 MR. BIERSTEKER: No objection subject
24 to the issues that we raised previously with the
25 Court.

Burns - direct/Patrick 728

1 THE COURT: Ladies and gentlemen,
2 throughout a trial we have two types of witnesses.
3 We have fact witnesses. Those witnesses, for
4 instance, if someone had observed an accident that
5 occurred, they would be a witness to an accident and

6 they would tell you the facts that the light was
7 red, the light was green, factual information and
8 such.

9 There's another type of witness
10 called expert witnesses. Counsel has offered this
11 gentleman as an expert witness to give an opinion
12 with specialized knowledge within the field;
13 therefore, that's why he went through the background
14 so accordingly I will qualify Dr. Burns to offer
15 expert opinions in the field of pulmonary medicine
16 and disease, public health, public health in general
17 as it relates to cigarettes.

18 Did you offer for internal also?
19 MR. PATRICK: And for internal
20 medicine.

21 THE COURT: That's my checkoff.
22 Gentlemen?

23 MR. BIERSTEKER: No objection, Your
24 Honor.

25 THE COURT: Okay. Go ahead.

Burns - direct/Patrick 729

1 BY MR. PATRICK:
2 Q. Now, Dr. Burns, in preparing the
3 Surgeon General's reports and studying the general
4 literature on tobacco and health have you studied
5 the consumption of the various forms of tobacco in
6 the United States?
7 A. Yes.
8 Q. And did you prepare and give to me so
9 we could put it up on the screen a demonstrative aid
10 to help you explain to the jury the consumption of
11 tobacco in the U.S. historically?
12 A. Yes. I gave you one of the slides
13 which I commonly use for audiences.

14 MR. PATRICK: With Your Honor's
15 permission if the Doctor could step down --

16 THE COURT: Sure.
17 This demonstrative aid, we mean
18 something like a slide or poster. It just
19 demonstrates a point. That's what counsel means
20 when he says demonstrative aid.

21 Now, Charles, where are you?
22 I just want to make sure. I think
23 we'll have to actually move the screen just a little
24 bit back so that the Doctor can get in front of the
25 screen, point to the screen.

Burns - direct/Patrick 730

1 Let me see counsel at side bar one
2 second.

3 Doctor, do me a favor. Don't talk.
4 I'm moving the court reporter.
5 (Pause.)
6 (At this time there is a discussion
7 at side bar off the record.)

8 BY MR. PATRICK:
9 Q. Dr. Burns, I'm going to hand you a
10 laser pointer with the admonition that -- just to
11 keep it focused on the screen so that --
12 A. Don't look right at it.
13 THE COURT: That's sort of the idea.
14 A. Okay.
15 Q. All right. If you can look at the
16 slide that's up on the screen. Is this --

17 THE COURT: If counsel wishes to move
18 they may, of course, move.
19 Q. Is this the demonstrative aid that
20 you prepared to help explain the consumption of
21 tobacco in the U.S.?
22 A. Yes, it is.
23 Q. All right.
24 A. Would you like me to explain it?
25 Q. Yes, please.

Burns - direct/Patrick 731

1 A. All of you can remember back in
2 school -- tobacco's been with us a long time. It
3 was actually provided to the sailors on Christopher
4 Columbus's ship when he first arrived in the New
5 World. It was, in fact, a major cash crop, major
6 for the 13 colonies or some of the 13 colonies, and
7 it was the income from that cash crop that allowed
8 the United States in its infancy to survive as an
9 independent country so tobacco plays an important
10 role in our history but tobacco's been used in a
11 variety of different ways.

12 Almost all of the use prior to the
13 20th century was not in the form that we use it now,
14 cigarettes.

15 In the early years it was used in
16 pipes. You may remember the Indians smoking tobacco
17 in pipes. It was used as chewing tobacco and it was
18 used as a form of snuff that we don't use any more
19 which is powdered tobacco leaf to inhale up the
20 nose.

21 Now, how they first figured out how
22 to do that I've never been able to clear it up. The
23 first person to do that must have been an
24 interesting human being but --

25 Q. Can --
Burns - direct/Patrick 732

1 A. -- I don't have that piece of
2 information.

3 Q. Can I stop you just for a second?
4 Yesterday in opening statements we
5 heard about King James.

6 A. Yes.

7 Q. And what is known as a counter blast
8 to tobacco.

9 A. Yes.

10 Q. Are you familiar with that counter
11 blast?

12 A. Yes. It's actually quite colorful.

13 Q. What type of tobacco was he talking
14 about? What form of tobacco was he talking about?

15 A. He was talking about the use of
16 tobacco as snuff particularly but also as chewing
17 tobacco and pipes, not in cigarettes.

18 Q. Okay. I'm sorry to stop you but that
19 comment just came up.

20 A. As you look from 1880 which is this
21 first set of -- up through the year 1999 you can see
22 that actually well into the 20th century almost all
23 of the use of tobacco in the United States was as
24 snuff, this black line, chewing tobacco, pipes or
25 cigars.

Burns - direct/Patrick 733

1 Now, let me explain what these graphs

2 are.

3 This per capita consumption of
4 different forms of tobacco in the United States.
5 What that is is the amount of tobacco. In this
6 instance it's actually pounds of tobacco used, all
7 right, divided by the number of people in the United
8 States over the age of 18 so it's a way of looking
9 at the average use of tobacco adjusting for the
10 changes in the population of the United States over
11 time and you can see the things did not include
12 cigarettes until early in the 20th century.

13 Several things changed. In the 1880s
14 a machine was invented that would mass produce
15 cigarettes and any of you who have ever tried to
16 roll your own know that it's hard to do and it's not
17 particularly conducive to using lots of cigarettes.
18 So that was one change. But not much happened.

19 The second change that happened is
20 one should also not lose sight of was the invention
21 of safety matches.

22 If you're smoking a cigar you can
23 smoke it for maybe an hour or longer and a pipe
24 smoker if they're fairly adept can keep it lit but a
25 cigarette is a sort-term use. In general you use it
Burns - direct/Patrick 734

1 for three, four, five, six minutes maybe so you need
2 to carry around with you something to light it.

3 In 1900 they invented safety matches.
4 A safety match is a match that doesn't
5 spontaneously ignite, it doesn't explode into flames
6 and you can imagine that spontaneously having your
7 pants catch on fire would be a pretty strong
8 disincentive to carry around matches to light
9 cigarettes but even with that things didn't change.

10 What changed in 1913 was the
11 introduction of mass marketing of Camel cigarettes,
12 a national mass marketing campaign offering
13 promotions, offering endorsements, et cetera. The
14 sale of Camel cigarettes took off and it was a
15 demonstration that advertising and mass marketing
16 could produce sales for product for which there had
17 not been much if any use prior to that.

18 There's one other change that
19 happened in here that is critically important and
20 that is that the type of tobacco used in cigarettes
21 was different from the types of tobacco used in
22 other burning tobacco forms, pipes and cigars.

23 There is an apocryphal story -- and I
24 don't know whether it's true but it makes some
25 sense -- that about this time somebody fell asleep
Burns - direct/Patrick 735

1 in a barn in North Carolina and the temperature got
2 too hot and it changed the temperature at which the
3 tobacco leaves were cured; that is, dried out and
4 prepared to be used for pipes or cigars or
5 cigarettes. The result was a tobacco that was
6 somewhat milder, easier to inhale, and it also when
7 burned had a different feel, different hydrogen,
8 different amount of acid when you smoked it and that
9 turns out to have made a very critical difference
10 because the smoke from cigars and pipes tends to be
11 alkaline, tends not to have much acid in it and so
12 the nicotine in the smoke exists then in a form that

13 can be easily absorbed through the mouth so you
14 don't have to inhale it with your lungs in order to
15 get the nicotine that you're desiring from that
16 tobacco.

17 When you make the smoke acid as you
18 do with the type of tobacco used in cigarettes you
19 can't get enough nicotine through your mouth to
20 satisfy your need for nicotine so you need to inhale
21 it into the much larger surface of the lung in order
22 to absorb the nicotine from that smoke. When you do
23 that along with that nicotine comes about 4,000
24 other chemicals. About 68 are cancer-causing
25 substances, variety of other toxins and irritants,
Burns - direct/Patrick 736

1 and it is the inhalation of that position and
2 retention and absorption in the lung that has led to
3 the epidemic of cigarette-related diseases in the
4 20th century and it is this curve, cigarettes, that
5 has resulted in that epidemic.

6 I have a second graphic that looks
7 just at per capita consumption of cigarettes and
8 this is now --

9 Q. You have the second graphic up on the
10 screen for the record. I just want to make sure
11 that that's clear and we're beginning in 1900.

12 A. Right. As we described previously,
13 prior to 1900 very few cigarettes were used. As a
14 matter of fact, in 1900 per capita consumption of
15 cigarettes was 54. It peaked out at some 4300 in
16 1963.

17 This is not any longer pounds of
18 tobacco. This is number of cigarettes. So this is
19 the total number of cigarettes consumed in the
20 United States, sold in the United States, divided by
21 the population of the United States over the age of
22 18 and you can see that things began to jump up
23 following 1913. There was a big jump during the
24 period of the First World War.

25 During the First World War we
Burns - direct/Patrick 737

1 mobilized large numbers of males from a
2 predominantly rural or agricultural country into the
3 military. One of the things that the military did
4 well was to socialize people to do various things
5 and any organization that can train a group of
6 people to charge a machine gun has a very powerful
7 force in teaching people's behaviors.

8 Unfortunately, one of the behaviors that they taught
9 at that time was the use of tobacco and particularly
10 the use of tobacco as cigarettes and, as a matter of
11 fact, General Pershing during the First World War
12 pleaded with Congress to provide cigarettes as part
13 of the rations to the soldiers.

14 Cigarette consumption continued to
15 increase through the '20s and '30s. It went down
16 during The Great Depression again demonstrating that
17 price or cost is an important characteristic of the
18 use of cigarettes.

19 We had an enormous jump between 1940
20 and 1945.

21 Now, the time of the Second World
22 War. Once again large numbers of males were
23 mobilized into the military. The tobacco companies

24 provided free solds -- free cigarettes to soldiers.
25 They were included to the soldiers' rations and
Burns - direct/Patrick 738

1 approximately 80 percent of the men who were born
2 during the years where they were likely to have
3 served in World War Two became cigarette smokers but
4 a second phenomenon was happening as well.

5 Cigarettes had been marketed to women
6 beginning in the 1930s but in the 1940s enormous
7 numbers of women took up smoking because women were
8 mobilized for the first time from the home into the
9 work force, into the war industry and with the
10 additional social and financial autonomy that came
11 with that work together with the marketing practices
12 enormous numbers of women took up smoking during
13 that period of time and you can see per capita
14 consumption jumped dramatically.

15 This is 1953 and we can see that per
16 capita consumption fell substantially.

17 By 1953 the scientific community had
18 the evidence to believe that cigarette smoking
19 caused lung cancer and that evidence consisted of
20 two parts. One was studies of people that showed
21 that people who smoke got lung cancer and the second
22 was the demonstration in animals that when you took
23 the smoke, you took the smoke condensate. Smoke is
24 simply particles floating in the air. When you took
25 all those particles together and painted it on the
Burns - direct/Patrick 739

1 back of an animal painting it caused cancers.

2 Q. Doctor --

3 THE COURT: Wait a minute. It's on
4 now. It's -- I don't want it to go in your face.

5 THE WITNESS: Okay.

6 THE COURT: So -- on and off but just
7 to keep -- there's a little --

8 THE WITNESS: Here we go.

9 THE COURT: Right. There you go. Go
10 ahead, counsel.

11 Q. Let me stop you right there because
12 you mentioned that -- some developments concerning
13 articles dealing with or studies dealing with lung
14 cancer as a result of cigarette smoke?

15 A. That's right.

16 THE COURT: Folks, while counsel is
17 getting that, get up and take a stretch.

18 (Pause.)

19 Q. Sorry. We're...

20 A. Okay.

21 Q. Okay. Now, yesterday we made
22 reference to this article by Dr. Wynder and Dr.
23 Graham in 1950. Can you tell us -- is this what you
24 were making reference to when you said that there
25 were reports in the literature concerning cigarettes
Burns - direct/Patrick 740

1 and disease?

2 A. Yes. This is the study -- one of the
3 studies that I was talking about where you take the
4 tobacco smoke and paint, apply it to the back of an
5 animal and the cancer then develops on the site
6 where you paint that smoke; therefore, you now have
7 evidence in people that it's the smokers who get
8 lung cancer and you have evidence of animals that

9 it's the smoke that causes cancer.
10 That information was widely presented
11 and led to substantial numbers of people,
12 particularly males, changing their smoking behavior
13 and per capita consumption -- if we can have that
14 slide back.
15 MR. PATRICK: Okay. Let's get back
16 to his slide.
17 THE WITNESS: I like my slides better
18 than his slides. Shouldn't be surprising.
19 MR. PATRICK: Okay.
20 A. And you could see that there was a
21 substantial fall in the use of tobacco in the United
22 States.
23 At this point in time, mid-1950s, the
24 tobacco industry introduced filter cigarettes to
25 reassure the public that they were removing
Burns - direct/Patrick 741
1 substances that caused disease from the cigarettes.
2 They also came forward with public statements that
3 said the science is not clear, that we don't know
4 what causes cancer in an effort to confuse or
5 misrepresent to the public what the scientific
6 community was --
7 MR. BIERSTEKER: Objection, Your
8 Honor, to that characterization.
9 THE COURT: Response?
10 MR. PATRICK: Your Honor, I believe
11 it goes to the common knowledge, what was known in
12 the medical literature, what was known publicly.
13 THE COURT: I'm going to overrule it
14 only because it's going to go to his interpretation.
15 I'll give you wide latitude on response.
16 MR. BIERSTEKER: Thank you, Your
17 Honor.
18 THE COURT: Go ahead.
19 Q. Doctor, rather than us trying to go
20 back to a slide that we had use of yesterday let me
21 just ask you this: Are you aware of a statement
22 that appeared publicly known as A Frank Statement To
23 Cigarette Smokers from the makers of cigarettes?
24 A. Yes. The Frank Statement appeared I
25 believe in 1953. It then was published in almost
Burns - direct/Patrick 742
1 all the newspapers across the United States widely
2 as the position of the tobacco companies.
3 They said several things in that
4 Frank Statement, one of which was that the science
5 is not clear on this issue, that we don't have an
6 answer. They pledged that their concern about
7 health would be higher than their concern about
8 profits. They pledged that they would investigate
9 the causes of smoking-related diseases and they
10 pledged that they would work with the public health
11 community to answer the questions about whether
12 smoking caused disease and certainly on those last
13 two issues it is clear from my own experience that
14 they did not live up to those promises.
15 Q. All right.
16 MR. PATRICK: Let's go back to his...
17 A. With the introduction of filters and
18 the reassurance that they provided and the marketing
19 of cigarettes as lower tar cigarettes, lower yield

20 cigarettes, the tar was the name for the substance
21 that was painted on the back of animals, per capita
22 consumption went back up.

23 In 1964 it notched down again with
24 the release of the Surgeon General's report again
25 demonstrating that providing information to people
Burns - direct/Patrick 743

1 was a good thing to do and had an effect. It had no
2 way near as big an effect as it did the first time
3 around when it was unopposed by the tobacco industry
4 information.

5 In 1967 through '70 there was a
6 substantial climb in per capita consumption. That
7 was a period of time that some of you may remember
8 when in response to cigarette advertisements being
9 on television and radio under the fairness doctrine
10 it was required that a counter-advertising response,
11 antismoking response be provided to offer the people
12 perspective and perhaps for the first time in
13 history television was used to effectively deliver
14 the public health message about smoking and about
15 the need for cessation and per capita consumption
16 fell.

17 In 1970 Congress banned advertising
18 of cigarettes on television and radio. All the
19 antismoking spots also disappeared and you can see
20 that per capita consumption went back up again.

21 In 1974 we see the beginning of a
22 steady and progressive decline in the use of
23 cigarettes. When I speak to professional audience I
24 like to say that I joined the Public Health Office
25 in 1974 but as I'm under oath here I probably ought
Burns - direct/Patrick 744

1 not to claim credit for that decline. In actual
2 fact several things happened.

3 One was cigarettes became so -- less
4 socially acceptable. Nonsmokers began to object to
5 people smoking around them and it became less
6 socially acceptable, socially positive to smoke
7 cigarettes and therefore smokers began to feel
8 somewhat alienated and to consider their smoking
9 behavior. The smoker would walk into a restaurant
10 and be asked if you want to sit in the smoking or
11 nonsmoking section.

12 THE COURT: You rise for a purpose?

13 MR. BIERSTEKER: I do because of
14 post-1974 testimony about general knowledge or
15 consumption.

16 MR. PATRICK: Your Honor, that's
17 fine. We'll stop here and...

18 THE COURT: It's going to go a few
19 more minutes, about five more minutes and then we'll
20 take a break.

21 MR. PATRICK: I was going to say
22 we'll just stop at 1974.

23 THE COURT: Finish up.

24 Q. So we can -- but there -- in 1974
25 there began a decline?

Burns - direct/Patrick 745

1 A. Right. And there has been
2 substantial progress in resolving this enormous
3 public health problem.

4 Q. Now, you prepared a demonstrative aid

5 and I think it's up on the screen concerning the
6 historical events --
7 A. Sure.
8 Q. -- as you have analyzed them and
9 could you explain this graph to us, please?
10 A. I just want to get that -- it's
11 skewed by the computer I'm afraid.
12 Several of these events we've already
13 discussed. You can see it's from 1917 through 1919.
14 Obviously World War One began much earlier than
15 that, U.S. involvement --
16 THE COURT: Doctor, I'm going to ask
17 you to just keep your voice up because it's being
18 diffused by the fans so if you do that I'd really
19 appreciate it.
20 A. We can see The Great Depression which
21 lasted from approximately 1929 through the start of
22 the Second World War. You can see World War Two and
23 its enormous impact on cigarette consumption. Here
24 is the report, the first reports linking cigarettes
25 to disease in the early 1950s and then more
Burns - direct/Patrick 746
1 critically in the 1953, '54 period. And here is the
2 first Surgeon General's report.
3 On the bottom they have changes that
4 were being made in the cigarette. People tend to
5 believe that cigarettes are simply tobacco chopped
6 up and placed inside a roll of paper and that really
7 is very far from the truth.
8 The cigarette currently and for a
9 substantial period of time has been a highly-
10 engineered product.
11 The first of those changes began in
12 the 1940s with the introduction of reconstituted
13 tobacco. What early cigarettes were were indeed
14 chopped up tobacco. They take out the stems and the
15 veins in the leaves and use the remaining leaf and
16 you have the tobacco product. What they discovered
17 was that they could use those products, they could
18 use the stems by creating paper from it so they
19 would extract from the tobacco substances in the
20 tobacco and then treat that leaf just as you would
21 other products that maintain them, make a sheet of
22 paper out of it, put the tobacco extracts back in,
23 add whatever flavoring agents or other compounds
24 that you want to add including ones that keep the
25 tobacco moist, take that sheet of paper and then you
Burns - direct/Patrick 747
1 can chop it up. You can chop it up into whatever
2 size pieces you want. You can also expand the
3 tobacco which occurred in the 1960s which is making
4 it like puffed wheat so what you do is you take that
5 tobacco and puff it up. It takes up more space
6 within the cigarette.
7 You can see that in 1950 less than 1
8 percent of the cigarettes in the U.S. market were
9 filter cigarettes. By 19 -- by the mid-1950s over
10 half of the cigarettes sold in the United States
11 were filtered cigarettes and that coincided with
12 this return to an increase in consumption. Those
13 filters were offered as a means by which bad things
14 could be removed from the tobacco product in an
15 effort to reassure smokers about these reports

16 linking cigarettes particularly to cancer.
17 Q. Doctor, if I can ask a question here.
18 Did that happen? I mean, you put the filters on.
19 Did it remove all the bad things?
20 A. No, no. As a matter of fact, it has
21 taken us quite some time to sort through all of
22 that, the information, because we didn't really
23 understand it as well as we wanted to but it's now
24 clear that neither filters nor --
25 MR. BIERSTEKER: Objection, Your
Burns - direct/Patrick 748
1 Honor. Objection, Your Honor.
2 THE COURT: Wait. Wait. Wait. Time
3 line basis?
4 MR. BIERSTEKER: Yes, Your Honor.
5 THE COURT: Predicate the question on
6 a time line basis the source of information,
7 counsel. Sustained.
8 MR. PATRICK: Okay. Hold it.
9 THE WITNESS: Your Honor, can I --
10 THE COURT: No. No. He's going to
11 rephrase the question.
12 THE WITNESS: Okay. I'm just
13 confused by what you had said. That's all.
14 THE COURT: Right. You don't have to
15 be confused. Just as long as counsel understands
16 it.
17 Q. Dr. Burns, I'm going to show you on
18 the screen a document exhibit that's been agreed to
19 go into evidence and it's 8791 and it's a document
20 from a Mr. Wakeham of Philip Morris to Mr. Cullman
21 who is the Chairman of the Board of Philip Morris
22 dated March 24, 1961 and I would ask you, Doctor, if
23 you can review the first paragraph?
24 MR. PATRICK: Can you enlarge this,
25 please?
Burns - direct/Patrick 749
1 Q. First of all, Doctor, have you
2 reviewed -- seen this document before?
3 A. Yes.
4 Q. And reviewed it in your position as
5 an authority in the public health and -- issues
6 pertaining to tobacco?
7 A. Yes, I have, and Dr. Wakeham was a
8 long-time senior scientific director for Philip
9 Morris and in 1961 he wrote, It is interesting to
10 observe from these preliminary charts of nicotine
11 and tar delivery trends that most cigarettes are
12 running in the area of 28 to 30 milligrams total
13 particulate matter. That's all of the particles of
14 the smoke and equivalent to tar. Per cigarette was
15 between 5 and -- I can't read --
16 Q. I think it's 6 percent.
17 A. 6 percent nicotine in the total
18 particulate matter. Below this matter you have Kent
19 and the odd cigarette with very low deliveries.
20 Above this value you have the king, nonfiltered
21 cigarettes.
22 On studying these charts we speculate
23 that smokers fall into a more or less normal
24 distribution pattern -- that is, that they all are
25 grouped around the same behavior -- centered on the
Burns - direct/Patrick 750

1 28 to 30 milligram range. At the bottom end you
2 have those smokers concerned with the health scare
3 who have a climate -- climtated themselves to very
4 low deliveries. At the top end you have heavy
5 smokers who smoke either the king nonfilter or the
6 regular nonfilter. The king and nonfilter smokers
7 and the regular nonfilter smokers may actually be
8 smoking to a comparable delivery. The former group
9 omitting the last puff or two and the latter group
10 smoking down to the bitter end -- what they are
11 saying there is that the smokers are adjusting how
12 much smoke they get from an individual cigarette by
13 changing the way they smoke that cigarette; that is,
14 the less nicotine you put in the cigarette, the more
15 likely they are to smoke --

16 MR. BIERSTEKER: Objection Your Honor.
17 There's no question pending. I mean --

18 THE COURT: You think so?

19 MR. BIERSTEKER: Yes, Your Honor.

20 THE COURT: This is a difficult
21 format in asking the Doctor to read it without a
22 responsive format.

23 MR. PATRICK: I understand that.

24 THE COURT: It would go much easier
25 if you framed your issues, let the Doctor respond
Burns - direct/Patrick 751
1 specifically to the issues.

2 THE WITNESS: Okay.

3 THE COURT: And we will do that as
4 soon as we come back from our mid-morning break.

5 MR. PATRICK: Thank you very much.

6 THE COURT: Ladies and gentlemen, I
7 ask you to just leave your notebooks, papers and
8 your notebooks with your pens.

9 Doctor, why don't you just step up
10 here to leave the jurors some room.

11 We'll see you. We're going to give
12 you 15 down and 5 back and we'll reconvene at a
13 quarter after.

14 (At this time the jury leaves the
15 courtroom at 10:48 a.m.)

16 THE COURT: All be seated.

17 All right. Let me just make two
18 observations -- Doctor, you can step down.

19 THE WITNESS: Okay.

20 THE COURT: We definitely need the
21 microphone. I'm going to also see if we could hook
22 up -- it's going to have a real strong amplification
23 so you might want to split for two because the
24 number of fans is really diffusing the sound a lot
25 more than I had anticipated.

Burns - direct/Patrick 752

1 Also, Mr. Biersteker I had
2 erroneously given you back the file yesterday, Dr.
3 Burns, that manila file with the bullet points that
4 my clerk brought in to me yesterday.

5 MR. BIERSTEKER: Oh, I didn't return
6 that. I'm sorry, Your Honor. I don't have it here
7 but I will --

8 THE COURT: I'm sure you will. Okay.

9 All right. With that let's take 15
10 minutes. Let's be back here, ready to go, everyone,
11 quarter after, okay? Thank you.

12 MR. PATRICK: Thank you.
13 (Recess taken at 10:49 a.m.)
14 (Court is in session at 11:12 a.m.)
15 THE COURT: Thank you very much.
16 Please be seated.
17 Al, get the jury for me.
18 Off the record.
19 (Discussion off the record.)
20 (At this time the jury enters the
21 courtroom at 11:13 a.m.)
22 THE COURT: All right. Thank you
23 very much. All be seated.
24 All right, sir. You were about to
25 posit a new question.
Burns - direct/Patrick 753
1 MR. PATRICK: Yes, Your Honor.
2 BY MR. PATRICK:
3 Q. Dr. Burns, let me rephrase the
4 question I previously asked and that is based on
5 what you know today and your research today do
6 filter cigarettes produce less disease?
7 A. No.
8 MR. BIERSTEKER: Objection, Your
9 Honor.
10 THE COURT: Well, the answer is no so
11 I guess that moots that issue but so we have no
12 misunderstanding on where we're going on this let's
13 meet at side bar now.
14 (The following discussion takes place
15 at side bar:)
16 THE COURT: Okay. My guess is we are
17 now at the point of trial where there will be a
18 series of objections made by the defense
19 particularly in what counsel tend to call their
20 global issues. My guess is the subset of the global
21 issue one planet thereof is light cigarettes. Am I
22 correct?
23 MR. BIERSTEKER: That's correct, Your
24 Honor.
25 THE COURT: It appears that Mr.
Burns - direct/Patrick 754
1 Patrick is now asking the witness a series of
2 questions having to do with light cigarettes. The
3 objections that -- being posited had to do with the
4 time frame and subsequently-acquired knowledge that
5 is subsequent to Mrs. Mehlman's death and in
6 pretrial rulings had speculated -- because no one
7 wanted to be open with me as to what we were doing --
8 speculating that as one of the issues there's a
9 shifting from defective design to the defense's
10 rebuttal state of the art, common knowledge and the
11 shifting back again to the plaintiff and the
12 rebuttal to that was going to be light cigarettes.
13 Mr. Biersteker's position as I
14 understand it he should not be held to the standard
15 of 2001 that which would have been at the time of
16 the demise of Mrs. Mehlman and I said, yes, that's
17 true unless the plaintiff can show that there were
18 perchance documents that were either secreted, came
19 from, say, BAT or other such sources showing or
20 implicating one or both of the defendants'
21 knowledge.
22 We now had a series of questions.

23 I'm guessing that these pretrial rulings are now
24 coming into play with the series of questions.
25 Did I frame the issue correctly? 755
Burns - direct/Patrick

1 MR. PATRICK: I believe you did.
2 MR. BIERSTEKER: That's correct. I
3 would make one slight qualification and that is --
4 as opposed to '97 --
5 THE COURT: Okay. We'll address that
6 as a separate issue.
7 MR. BIERSTEKER: Okay.
8 THE COURT: All right. Now, the
9 basis of your objection now is?
10 MR. BIERSTEKER: Well, the basis of
11 the objection is precisely that. We should not be
12 held to a standard evidence as to reduced tar during
13 the time period when Mrs. Mehlman smoked to show
14 that in light of the science the behavior was
15 responsibly. To attack what we had done prior to
16 1974 on the basis of new knowledge that was acquired
17 after 1974 I believe is contrary to the law.
18 Kavanaugh versus Skillman Corporation. I think the
19 law has -- you can apply the science that exists
20 prior to 1974 but not about science that came into
21 play thereafter.
22 MR. PATRICK: I intend to tie it up
23 and I intend to tie it up specifically as to what
24 they were aware of in terms of filter cigarettes,
25 light cigarettes and whether or not they were aware
Burns - direct/Patrick 756

1 that they were no less or no safer than regular
2 cigarettes through this Doctor.
3 THE COURT: Are you in on this?
4 MR. ROSENBERG: Yes, I am.
5 THE COURT: See. It's like both
6 sides. You have to listen to both sides.
7 MR. ROSENBERG: I join Mr. Biersteker
8 and on top of that there's no evidence that she
9 smoked light cigarettes.
10 MR. PATRICK: She did smoke filter
11 cigarettes and it does address the question of
12 filters. All the cigarettes she smoked apparently --
13 well, the ones that were observed by Dr. Mehlman
14 were all filtered cigarettes.
15 MR. ROSENBERG: And we still have the
16 issue that it's based upon post- 1964 knowledge --
17 THE COURT: I was just going to
18 address that.
19 The pretrial rulings that I made said
20 that you can go back and say, Here's what we know in
21 2001 as opposed to what we knew a decade or two
22 before unless the caveats that I used were other
23 secreted documents to show that they, in fact, knew
24 that the lower levels could be done and should be
25 done and more specifically -- it's actually the
Burns - direct/Patrick 757

1 rebuttal to the defendant shift back to the design
2 defect so if that's your predicate and you're
3 telling me that's how you're tying it up, that's
4 fine. Understand, though, if it is not and you
5 don't, that's going to be their basis for dismissal
6 of that theory.
7 MR. PATRICK: Okay.

8 MR. BIERSTEKER: May I make a
9 suggestion?
10 THE COURT: Of course.
11 MR. BIERSTEKER: If he's got the
12 pre-1974 material like the document you're showing
13 him have him look at the document, have him read
14 portions of the document, ask him what his
15 understanding of the particular excerpt is and he
16 can talk about that. I don't have no problem with
17 that but to get a blanket opinion that has no merit,
18 it's already out of the box.
19 THE COURT: Part of the problem has
20 been the formatting of questions and I tried to
21 bring that -- I really don't tell people how to try
22 the cases, okay, but when it comes to a point that
23 it cannot be related to a specific area then it
24 becomes difficult. I have no problem with a lengthy
25 answer but it's got to be a little more direct
Burns - direct/Patrick 758
1 because this is really a specific area. It's almost
2 on the rebuttal after the --
3 MR. PATRICK: I intend to ask him to
4 lay a foundation that now through the year 2001 he
5 understands light cigarettes or filtered cigarettes
6 do produce disease based on what we do know today
7 and I'm going to ask him why that is and then I'm
8 going to ask him based on the document that he was
9 reviewing or at least reviewed on the screen was
10 Philip Morris also aware that there were was the
11 issue of compensatory smoking and that filter
12 cigarettes were no safer than regular cigarettes
13 based on that knowledge in the 1961 document.
14 THE COURT: I'll allow him to do
15 that. He's going to tie it up but understand this
16 is almost high stakes poker; that if you pull it
17 off, that's fine. That's your predicate and it's
18 subject to cross -- let me just finish.
19 MR. BIERSTEKER: I'm just breathing.
20 THE COURT: You're breathing
21 anxiously.
22 If you don't do what they alluded to
23 in the pretrial -- I mean, if that's -- you know,
24 that's your case. If that's the basis of it I would
25 not be surprised that one or both of them jump up at
Burns - direct/Patrick 759
1 the end of the case and say, Hey, you know what?
2 It's not here.
3 MR. ROSENBERG: And there's another
4 point. Absolutely no evidence in this case that
5 Mrs. Mehlman compensated.
6 THE COURT: I can't rule that -- I
7 have to hear the evidence.
8 MR. BIERSTEKER: The problem I have
9 is that the particular document he's using really
10 only addresses people who smoke more cigarettes. It
11 doesn't detect the design features of the cigarettes
12 themselves. To say low tar cigarettes yield less
13 what he's taking -- some smokers smoke more
14 cigarettes -- that's what they basically say -- and
15 as a means to compensate.
16 THE COURT: Right.
17 MR. BIERSTEKER: Now, that doesn't
18 attack the design feature of a low tar cigarette.

19 If he's going to use that into this whole broad area
20 of post-'74 and if -- it doesn't establish Philip
21 Morris's knowledge that the low tar cigarettes were
22 better. In fact, just the opposite. The document
23 presupposes the opposite. They smoked twice as many
24 of them.

25 THE COURT: Isn't the point -- but
Burns - direct/Patrick 760
1 isn't that the whole issue of the shifting at that
2 point? And I can't really judge that now because I
3 haven't seen or heard. I don't know what his
4 testimony is and it would be unfair for me to do it
5 at this time. That's why I say this is a -- as I
6 see it and, of course -- as I see it this is an
7 all-or-nothing strategy here.

8 MR. BIERSTEKER: Okay.

9 MR. ROSENBERG: And that's why I
10 reiterate that the testimony is unequivocal about
11 Dr. Mehlman that there's no one that will be able to
12 say that she smoked any more cigarettes when she was
13 smoking cigarettes that had less tar than before and
14 if that's where he's going with this, that's fine if
15 that's the stakes he wants to play.

16 THE COURT: It's your case. Put it
17 in.

18 MR. PATRICK: Okay.
19 (The following takes place in open
20 court:)

21 THE COURT: Ladies and gentlemen,
22 sometimes during the course of the trial you'll see
23 I have to speak to the attorneys at side bar. What
24 we're actually doing here -- remember I told you
25 that you are the judges of the facts and I will be
Burns - direct/Patrick 761
1 the judge of the law. As judge of the law there are
2 certain issues that come up regarding rules of
3 procedure, Rules of Evidence that I need to speak to
4 counsel about.

5 Because my rulings do not enter into
6 your decision on the facts I do it out of your
7 presence. I try to do it as expeditiously at side
8 bar rather than have you come out, go into the room,
9 come back in, okay? So we're not telling secrets
10 over here. We're actually doing business, okay?
11 All right?

12 Go ahead, counsel.

13 BY MR. PATRICK:

14 Q. Dr. Burns, based on your knowledge of
15 epidemiological studies particularly as they may
16 relate to the study of cigarettes that contain
17 filters do those cigarettes produce more or less
18 disease than regular cigarettes?

19 A. They produce the same amount of
20 disease. There's no reduction of disease risk when
21 you're smoking filtered cigarettes.

22 Q. And why is that?

23 A. Well, the reason why is that the --
24 many of the toxic substances are in tar and the
25 relationship, the ratio between tar and nicotine is
Burns - direct/Patrick 762

1 constant across cigarettes so you get twice as much
2 nicotine, you get twice as much tar.

3 People smoke to get nicotine. If you

4 put a little less nicotine in the cigarette, they
5 smoke that cigarette more intensely. They inhale
6 more deeply, take bigger puffs, draw harder on the
7 cigarette. They smoke more cigarettes. If you put
8 a filter on that blocks some of the smoke, they do
9 exactly the same thing because they're smoking to
10 get a certain dose of nicotine. They're trying to
11 get the effect of nicotine.

12 If you put a barrier in the way they
13 just work the cigarette harder in order to preserve
14 the amount of nicotine they get. When they preserve
15 the amount of nicotine that they get along with it
16 they preserve the amount of tar and so they don't
17 get a reduction in disease risk.

18 The numbers that you see measured in
19 filters or for low tar and nicotine cigarettes are
20 ones made by a machine and the machine doesn't
21 change the way it smokes because the machine doesn't
22 try to get nicotine. The machine just smokes the
23 cigarette a certain size puff, certain duration with
24 a certain frequency and it doesn't make any
25 difference to the machine whether there's a lot or
Burns - direct/Patrick 763

1 little nicotine, whether there's a filter in that.

2 THE COURT: What was the remaining of
3 the sentence? Whether there was a filter in that?

4 A. Doesn't make any difference whether
5 it is a filter or not in terms of the disease risk.
6 It's still trying to get the amount of nicotine --
7 the person is still trying to get the amount of
8 nicotine.

9 Q. Now, is that type of smoking behavior
10 described in any particular way?

11 A. Yes. That's commonly called
12 compensation or compensatory smoking behavior.

13 Q. Okay. Let's stop right there.
14 Based on your review of the document
15 that we just had on the screen before the break, and
16 that's Exhibit 8791, do you have an opinion based on
17 the information contained in that document from Mr.
18 Wakeham -- Dr. Wakeham --

19 A. Dr. Wakeham.

20 Q. -- Dr. Wakeham that Philip Morris in
21 1961 was aware of the phenomenon of compensation?

22 A. Yes. I believe this document clearly
23 demonstrates that the tobacco company, Philip
24 Morris, knew exactly what would happen with filter
25 cigarettes.

Burns - direct/Patrick 764

1 Q. And if you could step back down with
2 the Court's permission --

3 THE COURT: Sure.

4 Q. -- and indicate that portion of the
5 document or where it says in the document that
6 supports your position or opinion that they were
7 aware of smoking compensation?

8 A. Okay. It's this section right here.

9 THE COURT: Which paragraph?

10 MR. PATRICK: Second paragraph.

11 A. Second paragraph --

12 THE COURT: Thank you.

13 A. At the end of the second paragraph.

14 THE COURT: Thank you.

15 A. And I'll read the entire paragraph so
16 it's in context.

17 The announcement of health facts, in
18 quotes, such that -- as that by Hemmond at the last
19 American Cancer Society meeting probably shifts a
20 number of people towards the low side but I have a
21 feeling that the distribution pattern of total
22 intake is not being changed very much. The
23 cigarettes which are now growing, the Marlboro, the
24 Winston, the Salem, the Camel and the Pall Mall are
25 all delivering approximately 30 milligrams of
Burns - direct/Patrick 765

1 particulate matter or more with about 6 percent
2 nicotine content. As we know all too often the
3 smoker who switches to a high fi -- high filter
4 cigarette winds up smoking more units in order to
5 provide himself with the same delivery which he had
6 before. In short, I don't believe the smoking
7 pattern has changed much even with the cancer scares
8 in filter cigarettes.

9 Q. You can return to the witness stand.
10 Why don't we go back then to the
11 graph that we had previously.

12 All right, Doctor. I just asked you
13 to sit down. I'll ask you to stand back up. I
14 apologize.

15 A. It's good for my legs.

16 Q. All right. You had made mention of
17 filter cigarettes. If you would start back where we
18 left off.

19 A. As you can see right here in 1950
20 essentially none of the cigarettes smoked in the
21 United States was filter cigarettes. Less than 1
22 percent. If we were to put up a chart -- and
23 actually I have a chart but we have not prepared it
24 for today -- of the percentage of cigarettes sold
25 that were filtered cigarettes from about 1953
Burns - direct/Patrick 766

1 through about 1957 it would go almost straight up.
2 By the mid-1950s filter cigarettes went from
3 nonexistent to over half of the filtered cigarettes
4 consumed -- half of the cigarettes consumed in the
5 United States. With that, per capita consumption
6 also went right back up which is evidence that the
7 public health community has used to support the
8 relationship between the reassurance provided to
9 smokers of filtered cigarettes and the increase --

10 MR. BIERSTEKER: Your Honor, I object
11 to the answer. It's not responsive to any question.
12 It seems to be presenting claims that are not in
13 this case.

14 THE COURT: Let me just take a look
15 at this.

16 You're joining?

17 MR. ROSENBERG: Yes, I am, Your
18 Honor.

19 (Pause.)

20 THE COURT: Let me see counsels at
21 side bar.

22 (The following discussion takes place
23 at side bar:)

24 MR. BIERSTEKER: Your Honor, it seems
25 to me -- there seems to be almost a fraud claim

1 going on about the reassuring public smoking --
2 fooling people to smoke lower tar cigarettes and
3 characterizing that is not our intent. I really
4 don't think that belongs in this case. This case is
5 about a design defect and failure to warn plus his
6 answers are coming when I can't anticipate that
7 they're coming. The jury gets to hear it because
8 it's not a question-and-answer format. The question
9 is why don't we pick up where we left off. I have
10 no reason to believe this is coming. It's
11 prejudicial. If Your Honor is going to rule in my
12 favor to have us proceed this way I should be -- the
13 question should telegraph in some way kind of what
14 the answer's going to be so I object.

15 MR. ROSENBERG: This is the second or
16 third time --

17 THE COURT: This is?

18 MR. ROSENBERG: The second or third
19 time we've got more and he's just gone on and on.
20 He says something that's highly prejudicial in front
21 of the jury standing in front of the jury as if he's
22 delivering an opening or closing and, I mean, we
23 can't anticipate what he's going to say.

24 MR. PATRICK: I don't think there's
25 anything objectionable. What he just said, the

1 whole issue is smoking reinsurance and what a
2 reasonable consumer should have thought about
3 cigarettes and filter cigarettes because that's what
4 she smoked and the common knowledge within the
5 public, what the public thinks is certainly the
6 central issue of this case so --

7 THE COURT: Let him finish.

8 MR. ROSENBERG: Okay.

9 MR. PATRICK: -- so I think what he
10 said is certainly relevant and not objectionable.

11 I will try -- he's a teacher. He's a
12 professor. I'll try -- I've tried to interrupt him
13 and -- I just will disrupt his flow but I'll try to
14 do, you know, more in question-and-answer format.

15 THE COURT: This particular issue now
16 goes to the failure to warn issue and we now have
17 one foot in both theory camps. I've asked -- and
18 this is like the second or third time. I don't want
19 to tell you how to do the case. I understand that
20 he's a professor but, you know, we all try these
21 cases. You work with your witness. You know. It's
22 not the first time he's testified. He's done this
23 over a dozen times now. Question-and-answer format
24 as much as possible. I have no objections to the
25 narrative in and of themselves but his narrative

1 answers are so encompassing that they're a treatise
2 in and of themselves so either you get him into a
3 question-and-answer format or counsel's going to
4 stand up and, you know. Two more times, I'm going
5 to give you instruction in front of the jury, all
6 right?

7 MR. PATRICK: That's fine.

8 MR. ROSENBERG: Thank you, Your
9 Honor.

10 (The following takes place in open

11 Court:)
12 THE COURT: You may proceed.
13 MR. PATRICK: Thank you.
14 BY MR. PATRICK:
15 Q. Doctor, let's turn to a new area just
16 for a moment and that is I'm going to ask you for an
17 opinion.
18 Doctor, to -- in your opinion to a
19 reasonable degree of medical certainty based on your
20 study of the literature related to cigarette smoking
21 and lung cancer does cigarette cause human lung
22 cancer?
23 A. Absolutely without any question.
24 Q. And you were mentioning earlier in
25 the context of the Surgeon General's reports a term
Burns - direct/Patrick 770
1 known as scientific consensus.
2 A. Yes.
3 Q. What does scientific consensus mean?
4 A. Well, scientific consensus is the
5 process by which science arrives at sort of a
6 combined judgment about what's true. It begins with
7 the publication of facts and articles. Those then
8 have to be considered and percolated through
9 people's combined wisdom, if you will. They look at
10 it, they think about it, they think about what it
11 means and over time scientists both who have done
12 the studies and who have read the studies and were
13 knowledgeable in other areas arrive at a judgment
14 about something. That's what we call scientific
15 consensus. It's never a hundred percent. There's
16 always somebody who has a different opinion. There
17 are people who believe the world is flat, but it is
18 the majority or the bulk of the scientific community
19 and it's usually reflected by bringing groups of
20 scientists together to consider issues and reach a
21 judgment on whether the evidence in the science is
22 sufficient to draw a conclusion. That's what was
23 done with the Surgeon General's report in '64.
24 Q. Doctor, in your opinion again to a
25 reasonable degree of medical and scientific
Burns - direct/Patrick 771
1 certainty when was the scientific consensus reached
2 that cigarette smoking caused lung cancer?
3 A. By the late 1950s.
4 Q. Now, in your opinion does cigarette
5 smoking cause other cancers?
6 A. Oh, yes. It causes a variety of
7 other cancers including cancers of the oral cavity,
8 the mouth, the throat, the voice box, the esophagus,
9 the tube that you swallow through and also cancers
10 of the organs that excrete the toxins from the body,
11 the kidney and the bladder, as well as the pancreas
12 which is an organ that is also responsible for
13 excreting digestive juices.
14 Q. All right. We have a graphic and if
15 you can stand up again, please.
16 A. Sure.
17 Q. Are these the cancers that are caused
18 by cigarette smoking?
19 A. Yes. These are the cancers that the
20 Surgeon General's report has reached a judgment on
21 that are caused by cigarette smoking and sort of an

22 easy way to think about it is everything the tobacco
23 touches on its way in or its way out results in
24 cancer. The lip, tongue, the mouth, oral cavity,
25 the voice box which is just below that, the
Burns - direct/Patrick 772

1 esophagus, the tube that connects your mouth to your
2 stomach, the lung and then those organs that are
3 responsible for excreting substances from the body,
4 okay, particularly the bladder, and the kidney and
5 also the pancreas which has a particular role in
6 creating what I call enzymes and other substances
7 that digest your food. It's created in that organ
8 and excreted into your GI tract to help digest the
9 food that's there.

10 Q. Doctor, in your review of the medical
11 and scientific literature when was it first
12 discussed or recognized by the medical and
13 scientific community that cigarette smoking may
14 cause cancer?

15 A. Well, those -- those discussions
16 occurred in the late 1930s and 1940s particularly
17 with Dr. Oxner raising those concerns at that time.

18 Q. And who is Dr. -- who was Dr. Oshner?

19 A. Dr. Oxner -- Oshner was one of the
20 deans of cardiothoracic surgery in the United
21 States. He was one of the gentleman who helped
22 develop that as a specialty. He founded the Oshner
23 Clinic in New Orleans in Louisiana and he was quite
24 active in defining the relationship between
25 cigarette smoking and lung cancer. Some of his
Burns - direct/Patrick 773

1 articles were among the earliest raising the
2 possibility that this association might be the
3 direct cause of it.

4 Q. Were there any references in the
5 medical literature that cigarette smoking may cause
6 lung cancer prior to 1950?

7 A. Yes.

8 Q. And I believe you said -- what year
9 was it that a scientific consensus was reached?

10 A. Scientific consensus was reached by
11 the late 1950s; '57, '58, '59.

12 Q. And what was the -- what were all the
13 sources or the various means of establishing that in
14 terms of evidence that cigarette smoking was a cause
15 of cancer?

16 A. Okay. Well, let me take you through
17 that because it can be sort of confusing or magic
18 and it's not, okay? This is --

19 THE COURT: Excuse me. We're going
20 to enumerate the sources at this point?

21 MR. PATRICK: The sources of
22 evidence, the --

23 THE COURT: Don't explain it to me.
24 Explain it to him, okay?

25 Q. Doctor, I want you to tell us the
Burns - direct/Patrick 774

1 bases on which you can give the opinion or that it
2 was known cigarette smoking was a cause of lung
3 cancer.

4 A. You want me to describe the evidence
5 or just list the types of study?

6 Q. List -- just list the types of

7 studies at this point and we'll go into the other
8 sources of evidence.

9 A. The way -- the way causality is
10 concluded is by assembling all of the evidence
11 together and seeing whether it supports a judgment
12 that something causes something else.

13 The types of evidence that are
14 available on cigarette smoking are multiple. They
15 include studies of people with lung cancer, they
16 look at whether people smoke, they include -- those
17 are called epidemiologic studies and in particular
18 they're called retrospective epidemiologic studies
19 because they look back in time.

20 Epidemiology is simply the study of
21 human disease in people.

22 Q. Okay, now what type of studies would
23 those have been in the 1950s?

24 A. They were studies of patients with
25 lung cancer and they looked at in those patients
Burns - direct/Patrick 775
1 with lung cancer what are their characteristics to
2 the population.

3 If you have an epidemic of lung
4 cancer as we did in -- quite evidently by the 1930s
5 and '40s one of the very first things you do
6 logically would be to get together a group of people
7 with lung cancer and see how they differed from
8 other people. What was making this change, the lung
9 cancer death rates in the United States happen?

10 And so when you do that you find that
11 people with lung cancer are much more likely to be
12 smokers than a comparison group of people who don't
13 have lung cancer and they're much more likely to be
14 heavy smokers than people who don't have lung
15 cancer.

16 Another line of evidence that is used
17 is to then look at what happens when you take the
18 smoke and you apply it to animals. We talked a
19 little bit about that earlier.

20 Q. Okay. So you're now moving from
21 human studies to epidemiological studies to animal
22 data, animal studies?

23 A. I'm moving from retrospective
24 epidemiologic studies, animal studies.

25 THE COURT: And the question is?
Burns - direct/Patrick 776
1 MR. PATRICK: All right.

2 Q. In terms of animal data is there some
3 type of data that would support your position that
4 cigarette is a cause of cancer?

5 A. Yes. There is a wealth of animal
6 data both for application of smoke as a combined --
7 painting the tar of the cigarettes on the backs of
8 animals and also on another line of evidence which
9 is the individual chemicals that are smoked
10 demonstrating that those chemicals by themselves can
11 cause cancer so another line of evidence is to look
12 at what the smoke is composed of and you are able to
13 identify that there are many cancer-causing
14 chemicals in that smoke.

15 The next line of evidence is to look
16 at people who don't have any disease, people who are
17 just general people in the population and you follow

18 them forward in time. That's also an epidemiologic
19 study, the study of human disease but it's called
20 prospective because you're looking forward and then
21 you see who develops cancer, and what you find is
22 the people who smoke develop more cancer than the
23 people who don't smoke with lung cancer; that the
24 amount of lung cancer that they develop, the rate at
25 which they develop lung cancer increases with the
Burns - direct/Patrick 777

1 rate of their cigarette smoking. It increases with
2 the length of time of their cigarette smoking; that
3 it decreases when they quit. All of that evidence
4 in a prospective evaluation which allows you to be
5 certain that there's a very close, strong
6 relationship between the occurrence of cigarette
7 smoking and the occurrence of cancer.

8 You then also use epidemiology to
9 look at groups where there are questions. People
10 who are exposed to atmospheric air pollution, people
11 who are exposed in occupational settings. Even
12 twins. People with different diets and in each of
13 those settings when you look at it it's the smokers
14 who get more lung cancer than the nonsmokers.

15 The next line of evidence is to look
16 at what happens in the body of people. That can be
17 done in two ways. One, it can be done in autopsy
18 studies; either people with disease or people who
19 die suddenly like in an automobile accident and you
20 look at the lining, the cells of those airways that
21 inhale the smoke. That is, after all, where the
22 cancers develop and you show progressive changes in
23 those people that move from normal cells towards
24 cancer and the more someone smokes the farther along
25 that path they're likely to be.

Burns - direct/Patrick 778

1 You can also do the same thing by
2 looking at cells that people cough up. All of you
3 are familiar with the PAP test which is a cellular
4 examination of cervical cells from the woman where
5 they're looking at individual cells to see whether
6 they're there. You can do the same thing when you
7 cough up cells from your -- your lungs and you can
8 see that those cells are more and more abnormal
9 depending on people's smoking behavior and that they
10 revert back towards normal when people quit.

11 You take all of that evidence and the
12 fact that it's been done in different populations,
13 different countries, different investigators, you
14 put it all together and you're able to then reach a
15 judgment that cigarette smoking causes lung cancer.

16 Q. Now, in 1964 did the Surgeon General
17 of the United States conclude that cigarette smoking --
18 there was a consensus that cigarette smoking was a
19 cause of lung cancer?

20 A. Yes.

21 Q. Did the Surgeon General conclude that
22 it was a cause of lung cancer in both men and women?

23 A. No. The Surgeon General's advisory
24 committee concluded that cigarette smoking was
25 established as a cause of lung cancer in men but

Burns - direct/Patrick 779

1 that the data was not adequate to establish as a
2 cause in women.

3 Q. When did the Surgeon General if ever
4 conclude that cigarette smoking was a cause of
5 cancer in women?

6 A. By the late 1960s the Surgeon
7 General's report had concluded that and we wrote
8 obviously a report in 1980 that was directly devoted
9 to the disease consequences of women where we tried
10 to make it very clear and absolutely unequivocal
11 that women had the same risk of lung cancer as men
12 provided they smoked the same.

13 Q. Was there some understanding or some
14 speculation that there was -- there was some
15 difference because of gender that women were less at
16 risk for cancer caused by cigarette smoking?

17 A. Absolutely. The -- even when I was
18 in the Public Health Service in 1974 and '5 there
19 was considerable speculation that women were somehow
20 protected.

21 As many of you know, women are indeed
22 protected premenopausally, before menopause, from
23 heart disease. They get less heart disease than men
24 because of the estrogens that they have that's part
25 of their premenstrual hormonal cycles so there was a
Burns - direct/Patrick 780

1 question as to whether or not they might also be
2 protected from developing lung cancer.

3 The reason why that was such an issue
4 was that the lung cancer death rates in men were so
5 much higher than lung cancer death rates in women
6 and I also have that as a graphic if we can show it.

7 Q. Before we do that --

8 A. Okay.

9 Q. -- let me show you plaintiff's
10 Exhibit 50162 which is I believe the Surgeon
11 General's report of 1980 and I believe we have
12 agreement on this.

13 A. Yes.

14 Q. Is that the Surgeon General's report
15 for 1980?

16 A. Yes, it is.

17 Q. Were you involved in the preparation
18 of that report?

19 A. Yes.

20 Q. And are you familiar with that
21 report?

22 A. I'm quite familiar with it.

23 Q. And does that report deal with the
24 issue of cancer caused by cigarette smoking in
25 women?

Burns - direct/Patrick 781

1 A. Yes. It draws a clear and definitive
2 conclusion that cigarette smoking causes lung cancer
3 in women.

4 Q. And is there a particular portion in
5 that Surgeon General's report on the belief, the
6 previous belief that somehow women were at less risk
7 for lung cancer from cigarette smoking?

8 A. Yes.

9 Q. Doctor, if you could come down and
10 see if you can tell us where that portion of this
11 Surgeon General's report is that deals with that
12 issue?

13 THE COURT: Excuse me, counsel. Just

14 for the record, this is Roman Numeral V of the
15 report because there's no page number and --
16 THE WITNESS: This is --
17 THE COURT: Just a minute, please.
18 There's a graphic and I have no
19 reference point to what page of that document you're
20 referring to so just for the record purposes...
21 MR. PATRICK: All right. This is --
22 Q. Doctor, could you tell us where this
23 is found in the Surgeon General's report?
24 A. This is the Surgeon General's preface
25 where the Surgeon General tells the scientific and
Burns - direct/Patrick 782
1 public communities what this report has in it, what
2 it means, what it supports.
3 THE COURT: Thank you very much.
4 Q. Let's see if we can see the entire
5 page here.
6 We've got on the screen now the
7 health consequences of smoking for women, report of
8 the Surgeon General, 1980.
9 MR. PATRICK: Next, please.
10 Q. And this is Roman Numeral V, the
11 preface?
12 A. Yes.
13 Q. And we're on the preface page?
14 A. This is the preface by Dr. Julius
15 Richmond who was the Surgeon General at that time.
16 Q. And in this preface is there a
17 discussion of the belief that existed prior to the
18 1980 Surgeon General's report that women were
19 somehow different from men regarding their risk of
20 lung cancer from cigarettes?
21 A. Yes. One of the principal reasons
22 why this report was written, why we would write a
23 report specifically devoted to women -- I mean, we
24 had never written a report specifically devoted to
25 men, for example -- was that there was this
Burns - direct/Patrick 783
1 perception both on the public's part and to a
2 certain extent in the scientific community that
3 women were biologically protected because they had
4 less risk of developing lung cancer for the same
5 smoking behavior and, quite clearly, when that's
6 examined, that's not true.
7 One of the principals themes of this
8 report as Dr. Richmond described it was first -- the
9 first theme was that women are not immune to the
10 damaging effects of smoking already documented for
11 men. The apparent lower susceptibility to
12 smoking-related diseases among women smokers is an
13 illusion reflecting the fact that women lag one-
14 quarter century behind men in their widespread use
15 of cigarettes.
16 Men started to smoke in 1913. Women
17 started to smoke in 1935 to '40.
18 They then go on to address it in the
19 specific section to define the fallacy, the
20 falseness of women's immunity. All the major
21 prospective studies of smoking and mortality have
22 reached consistent conclusions. Death rates from
23 cardio heart disease, chronic lung disease, lung
24 cancer and overall mortality rates are significantly

25 increased among both women and men smokers. These
Burns - direct/Patrick 784

1 risks increase with the amount of smoke duration,
2 depth of smoking inhalation and the tar of the
3 cigarette.

4 Q. Doctor, have you analyzed the data
5 concerning the consumption of tobacco products or
6 cigarettes by men and the consumption of tobacco --
7 products in cigarettes by women and how they
8 compare?

9 A. Yes, I have.

10 Q. And do you have a slide or a graphic
11 that you prepared of that?

12 A. I have a slide that shows the
13 relationship of overall per capita consumption in
14 male and female lung cancer death rates and the data
15 that you just described are examined by looking at
16 what's called birth cohorts --

17 THE COURT: I'm sorry. I --

18 A. Birth cohorts which is a complicated
19 graphic to present but it's fairly simple.

20 What you do is you simply look at
21 people who were born during certain calendar years,
22 1900 to 1905, 1906 to 1910 and so on and look at
23 their entire history of smoking, their prevalence or
24 their frequency -- the likelihood of them smoking
25 throughout that entire life span. That allows you
Burns - direct/Patrick 785

1 to compare people at different points in time.

2 When we look at men to do that, the
3 very high prevalence rates occur very early on. 60,
4 70 percent of men born in 1900 to 1905 and it's up
5 to 80 percent the men born in 1910 through 1930.

6 In women, you see very little smoking
7 until mid-1930s and early 1940s and then you see a
8 very rapid rise in the prevalence of smoking across
9 multiple age groups of women so it's very clear that
10 men were the predominant group smoking in the 1910,
11 '20, '30 period and women began smoking in large
12 numbers only around the time of the Second World
13 War.

14 Q. We have a graphic that's just been
15 put on the screen and it's entitled Comparison Per
16 Capita consumption Male and Female Lung Cancer Death
17 Rates.

18 Could you explain the comparison
19 between -- of the death rates for males and females
20 and how it's progressed over time?

21 A. There -- there are several pieces of
22 information that it is important to understand from
23 this graphic.

24 This graphic has three lines on it.
25 The first is one we talked about before which is per
Burns - direct/Patrick 786

1 capita consumption of cigarettes, the number of
2 cigarettes smoked in the United States divided by
3 the entire population. And you can see that it went
4 up and then went down.

5 The second line is male lung cancer
6 death rates. Those are death rates in men.

7 The first piece of information you
8 need to observe is that rates were enormously low.
9 They weren't even recorded prior to 1930. At this

10 point in time, the first decade of the last century
11 a review was conducted of lung cancer and the
12 results of that review were that there wasn't much
13 we knew about this disease but one of the things we
14 could say was that it was the -- one of the rarest
15 of human diseases.

16 It went on to become the largest
17 cause of cancer death in men and in the mid-1980s
18 became the largest cause of cancer death in women by
19 disease that essentially did not exist at the turn
20 of the century.

21 We saw this rise, this epidemic of
22 lung cancer in men beginning in the 1930s and '40s
23 and that is what triggered scientists to study what
24 the cause of this dramatic rise in lung cancer was.

25 You can see that in the period of the
Burns - direct/Patrick 787
1 1960s lung cancer death rates in men were enormous
2 and lung cancer death rates in women had not changed
3 very much.

4 That rose to a concern with the
5 Surgeon General's report and with the scientific
6 community because we could not be certain that women
7 were not somehow protected. Maybe estrogen
8 protected them. Maybe some other aspect of being a
9 woman protected you from developing lung cancer.

10 We now know, of course, that what
11 women were protected from was cigarette smoking, not
12 lung cancer, and as they, too, had been smoking for
13 20 or more years their rates of lung cancer rose.
14 You'll note that there's a lag period here between
15 onset of cigarette smoking and onset of lung cancer.
16 That's because lung cancer doesn't occur from
17 smoking a single cigarette. It's a long process of
18 multiple changes in the cells of the airway over
19 time and it takes time for all of that damage to
20 accumulate to the point where you develop a cancer.
21 It takes about 20 years give or take a few years and
22 you can see that men who began to smoke here around
23 1915, by the 1930s had dramatically rose in lung
24 cancer. Women who took up smoking some 20 to 30
25 years later had their rise in lung cancer some 20 to
Burns - direct/Patrick 788

1 30 years later and as men began to quit back here in
2 the '50s and '60s we ultimately wound up with a
3 decline in lung cancer death rates in men. We have
4 yet to see the rates of -- lung cancer death rates
5 in women stop increasing.

6 Q. Doctor, what percentage of lung
7 cancers -- and this is both for men and for women --
8 but do you have an opinion with a reasonable degree
9 of medical certainty as to what percentage of lung
10 cancers are caused by cigarette smoking?

11 A. Yes. Approximately 90 percent of
12 lung cancers that occur in the United States are
13 directly caused by active cigarette smoking. That
14 is by the smoking themselves.

15 Q. Now, Doctor, I'd like to switch to
16 another area and it may require the use I believe of
17 the flip chart over here.

18 A. Mm'mm.

19 Q. But would you be able to actually
20 draw a lung --

21 A. Mm'mm.
22 Q. -- and be able to describe how the
23 lung functions, what its purpose is?
24 A. Sure. This will be fun except for
25 the fact that I can't draw worth spit so if you'll
Burns - direct/Patrick 789
1 give me some latitude in the artistic aspects of
2 this.
3 THE COURT: I'm going to move. Why
4 don't the counsel move and we can all see what's
5 being drawn?
6 THE COURT OFFICER: Judge is going to
7 see this also.
8 THE COURT: I'll go where you are,
9 Al.
10 THE COURT OFFICER: Okay.
11 THE COURT: That's why we have the
12 comfortable chair here. It's not for Al.
13 THE WITNESS: Rank has its
14 privileges.
15 A. Let me take a shot at drawing this
16 here.
17 THE WITNESS: I wasn't kidding when I
18 said I can't draw.
19 A. So that -- that's the outside of
20 somebody generally.
21 Q. Is that supposed to be a human being?
22 A. It's the best I can do. Maybe if I
23 put an eye in it will help.
24 THE COURT: No, don't.
25 THE WITNESS: Well, sorry.
Burns - direct/Patrick 790
1 THE COURT: Question.
2 Q. Doctor, based on that graphic where
3 would the lung be found?
4 A. Okay. The lung would be found here
5 in the chest, okay? This is someone's waist and
6 there is a muscular structure called the diaphragm
7 which is what you breathe with. That muscle
8 contracts, pulls down your rib cage and muscles on
9 your rib cage and chest contract and pull your
10 muscles out and the combination of those two suck
11 air into your lung, all right, so it comes in
12 through your mouth, down through your trachea, the
13 trachea divides and then you get multiple divisions
14 and then subdivisions of the airways until they get
15 very, very small.
16 That's -- what's the purpose of the
17 lung? What does the lung do?
18 Well, very early on in a single cell
19 of very small animals where did you get oxygen that
20 you need to live? You absorbed it right through
21 your skin. As you got bigger, as your mass gets
22 bigger -- some of us have more mass than we'd like
23 but as the mass gets bigger absorbing it through the
24 skin can't get you enough oxygen to your muscles and
25 your tissues to be effective so you need to find a
Burns - direct/Patrick 791
1 way to get that oxygen in. There are two things
2 that happen.
3 One is you got your heart. Your
4 heart then pumps out through the aorta the blood but
5 you need to be able to bring in that outside air

6 that has the oxygen in it and in bringing it in
7 contact with the blood so the blood can absorb the
8 oxygen. Also, you need to get rid of the metabolic
9 by-products, the carbon dioxide when you burn that
10 oxygen for energy so you need to get rid of that
11 carbon dioxide so you need to exhale the bad stuff,
12 okay?

13 So in order to do that you need to
14 bring a very, very thin layer of blood in direct
15 contact with air and the way the lung does that is
16 by taking a surface. That surface is about
17 three-quarters the size of a tennis court.

18 THE COURT: Please. Try to hear all
19 this. Go ahead.

20 THE WITNESS: Okay.

21 A. That tennis court then is folded up
22 and folded up and folded up into a series of tiny
23 little grapelike structures. They're called
24 alveoli, a-l-v-e-o-l-i.

25 THE COURT: Go ahead.

Burns - direct/Patrick

792

1 A. And those grapelike sacs will then
2 contain air and there's about 300 million of them in
3 all but for those to work they've got to be
4 connected to the outside air and they've got to be
5 connected to the blood. They're connected to the
6 outside air through this tube and then a branching
7 and a branching and a branching and a branching
8 until you get down to tubes that are only a little
9 bit thicker than a hair. A little bit thicker than
10 that. And they'll have a bunch of these little
11 grapelike structures hanging off so when you suck in
12 with your chest those grapes fill up with air,
13 you've got lots of oxygen in them, when you breathe
14 out, that air goes out and it carries with it carbon
15 dioxide.

16 So how does the oxygen get into the
17 rest of the body and how does the carbon dioxide get
18 from the rest of the body to those grapelike
19 structures?

20 The way that happens is also
21 fascinating because what happens is the blood
22 vessels come back from the body to the right side of
23 the heart and dump in to the right atrium, the right
24 chamber, and then you have a pump on this side, that
25 is the right ventricle, and it pumps blood out to

Burns - direct/Patrick

793

1 both lungs and then those arteries branch and they
2 branch and they branch and they branch and they
3 branch until they get down to the size of the
4 alveoli and then the tiny hair-like vessel called a
5 capillary, c-a-p-i-l-l-a-r-y, parades a single cell
6 of blood, a single red blood cell at a time to pass
7 through those little grapelike structures.

8 This cell is -- can't be seen with
9 the naked eye. You have to look at it under the
10 microscope to see it.

11 It is filled with a substance called
12 hemoglobin. Many of you have had your hemoglobin
13 measured at the doctor's office or hematocrit
14 measured. Hemoglobin is a compound or a protein
15 that latches on to oxygen. It really holds it nice
16 and tight so it can absorb lots of it. It's in the

17 red blood cell and the red blood cell then gets put
18 right next to that air. There is only a very, very
19 thinnest of possible membranes between the two and
20 the oxygen can zip right in and the carbon dioxide
21 in that blood can zip right out. That red cell then
22 goes around to the left side of the heart, gets
23 pumped up to the aorta, goes to your brain, goes to
24 your muscles, goes to your liver and stomach and
25 other organs and those red blood cells again go down
Burns - direct/Patrick 794

1 to the little capillaries right next to the muscle
2 and give up the oxygen the muscle needs to be able
3 to burn the energy and contract so the purpose of
4 the lung is to bring your external environment into
5 you, inside, so that you can get the oxygen from it
6 and to allow you to excrete or get rid of the carbon
7 dioxide which your body makes.

8 Without that you die very quickly.
9 As all of you know if you stop breathing for four or
10 five minutes you become unconscious and after a
11 period of time shortly longer than that you die.
12 That's because there aren't any stores of oxygen in
13 the body. You have to take it in on a
14 minute-by-minute basis in order to stay healthy.

15 Q. Now, Doctor, if your -- the person in
16 this graph were to have a cigarette and inhale the
17 smoke from a cigarette into his lungs what would
18 happen?

19 A. Okay.

20 Q. Or what happens?

21 A. Well, there's several things that
22 happen.

23 One is that your body was designed to
24 protect this lung. It's very vulnerable, okay?
25 It's soft tissue. It's very thin, okay, and you
Burns - direct/Patrick 795

1 can't assault it. You can't abuse it. Your body
2 was designed to filter out all the things that you
3 normally don't want like dust and particles and
4 stuff. You know, you're walking around in the
5 woods, pollen, all kinds of things. Because when
6 you inhale those big particles come in and they
7 can't make a corner. Because they're so big when
8 they come in they wind up getting stuck here in the
9 back of your throat or even more importantly here in
10 the back of your nose. You have a whole set of
11 structures there that are designed specifically to
12 filter out those big particles.

13 The particles in cigarette smoke
14 however are tiny. They are in general about .2 to
15 .4 microns, much smaller than the size of a human
16 hair so when they come in they tend to float along
17 with the air. They don't have enough weight to get
18 stuck on the back of the throat as they're trying to
19 make the corner. They just go along on that stream
20 and when you inhale from your lung and when you
21 inhale them they go in and they deposit -- they coat
22 all these airways all the way down. They even get
23 out to those like grapelike structures but there are
24 very, very thin surfaces that have almost no problem
25 so the smoke coming in essentially paints much as
Burns - direct/Patrick 796

1 the animal skins were painted with tar. Your

2 airways get painted with tar, breath by breath on
3 each puff, day by day, week after week, year after
4 year.

5 Q. Now, does cigarette smoke contain
6 chemicals?

7 A. Absolutely.

8 Q. Are any of the chemicals in cigarette
9 smoke considered to be carcinogenic or cause cancer?

10 A. Yes. There are about 4,000 -- four
11 and a half thousand now chemicals that have been
12 identified in cigarette smoke. Of those about --
13 more than 60 -- about 68 at the last count I think
14 have been identified as carcinogens.

15 Q. Have you attempted to prepare a list
16 of the carcinogens in cigarette smoke in the form of
17 a graphic that we can --

18 A. I have a graphic that is a partial
19 list of --

20 THE COURT: Are we done with the
21 diagram? I'd like to get back to --

22 MR. PATRICK: Yes, Your Honor. We can
23 move the easel.

24 THE COURT: Just wait for all counsel
25 to get back, please.

Burns - direct/Patrick 797

1 I want this diagram marked before the
2 lunch session.

3 MR. PATRICK: Yes, Your Honor.

4 THE COURT: Actually, if we're going
5 to go through what's on here maybe this would be an
6 appropriate place to stop right now.

7 MR. PATRICK: That would be fine,
8 Your Honor.

9 THE COURT: Okay. All right.

10 Folks, I'm going to let you down a
11 few minutes earlier for lunch before our court
12 reporter gives up coughing. Wait. Let me give you
13 some water.

14 Folks, if you would, leave your
15 notebooks down, pens. We're going to resume. I'd
16 like to try to have you back at 1:30. Send Al down
17 for you and we'll continue with the Doctor's
18 testimony, all right? Just be careful on the way
19 out.

20 (At this time the jury leaves the
21 courtroom at 12:13 p.m.)

22 THE COURT: All right. Thank you.
23 All be seated.

24 Doctor, you may step down. You're
25 excused until for the luncheon recess.

Burns - direct/Patrick 798

1 Anything else --

2 MR. ROSENBERG: I think -- Mr. Michie
3 is here. There is sort of an agreement that Mr.
4 Michie and Mr. Migliori can put on the record.

5 THE COURT: Do you want to submit
6 that in writing or you want to put that on the
7 record? How do you want to do it.

8 MR. MICHIE: Whatever --

9 THE COURT: Just type it up, sign off
10 on it and we'll submit it, okay?

11 MR. ROSENBERG: Thank you, Your
12 Honor.

13 THE COURT: All right. With that
14 we're in recess. Try to be back. By the time I get
15 the elevator down, you know, it's going to be 1:30,
16 1:40.

17 I'm coming. I'm coming. All right.
18 And let's do it that way. Okay? Thanks very much.

19 MR. ROSENBERG: Thank you, Judge.

20 THE COURT: See you.

21 (Exhibit Plaintiff's A marked for
22 identification.)

23 (Luncheon recess taken at 12:15 p.m.)
24 AFTERNOON SESSION
25 (Court in session at 1:36 p.m.)

Burns - direct/Patrick 799

1 THE COURT: Thank you very much.
2 Please be seated.
3 Doctor, would you resume the stand,
4 please.

5 THE WITNESS: Sure.
6 MR. CLARK: Off the record.
7 (Discussion off the record.)
8 THE COURT: All right. Everyone
9 ready?

10 MR. BIERSTEKER: Yes.
11 (At this time the jury enters the
12 courtroom at 1:38 p.m.)

13 THE COURT: Mr. Clark can be the
14 trail blazer around all these wires. I don't know
15 what to tell you.

16 All right. Thank you. All be
17 seated. Mr. Haefele, can I impose upon you to open
18 that door?

19 MR. HAEFELE: Yes.

20 THE COURT: Before we have a problem
21 with the heat issue here. All right.
22 Welcome back. Better than yesterday,
23 right? Huh? Getting there. All right. Good.
24 This is good.

25 All right. We're going to continue
Burns - direct/Patrick 800
with Dr. Burns' testimony.

1 MR. PATRICK: Thank you, Your Honor.
2 BY MR. PATRICK:
3 Q. Dr. Burns, before we broke for lunch
4 I believe you had identified or said that there are
5 chemicals in cigarette smoke?
6 A. Yes. That's correct.
7 Q. And of those chemicals are some of
8 those carcinogens?
9 A. Yes. There are about 4000, 4500
10 chemicals and at last count at least last month,
11 there are about 68 of them there were carcinogens.
12 Carcinogens are compounds that can cause cancer.
13 Q. And have you prepared a graphic that
14 lists the carcinogens in cigarette smoke?
15 A. Lists some of them, yes.
16 Q. All right. If you could come down if
17 that would be possible.
18 Now, in your review of the medical
19 literature and in your review of information that
20 has been made available to you from industry sources
21 and documents what were some of the first
22 carcinogens that were identified or chemicals
23

24 identified as carcinogens that are on your list?
25 A. Well, the first one is where the benz --
Burns - direct/Patrick 801
1 polycyclic aromatic hydrocarbons. It's a complex
2 word but it's really simple.
3 What it means, hydrocarbons are
4 compounds that are made up of carbon and hydrogen.
5 They also have nitrogen and oxygen. Polycyclic
6 means that they're made up of rings that have a
7 carbon core to it and poly obviously means that
8 there's more than one ring. So many of these are
9 polycyclic aromatic hydrocarbons.
10 The one that was identified earliest,
11 the ones that were identified earliest were
12 benzopyrene and benzanthracenes both of which are
13 carcinogens that are formed -- that are found in
14 many burning materials.
15 Q. What are some of the other important
16 carcinogens that are present in cigarette smoke?
17 A. Well, the ones that are also quite
18 important are ones that are called tobacco-specific
19 nitrosamines. Nitrosamines are another class of
20 compounds and what makes them tobacco-specific is
21 that they form from nicotine. Nicotine occurs in
22 very small amounts of plants but it's essentially
23 limited to tobacco as a product and when you cure
24 tobacco leaf particularly when you cure it with a
25 propane heater it generates oxides of nitrogen and
Burns - direct/Patrick 802
1 nitrogen and oxygen is a compound, they attach to
2 the nicotine and create the carcinogens that are
3 called tobacco-specific nitrosamines.
4 There are also several compounds,
5 arsenic, nickel, cadmium that are also carcinogenic
6 but they're present in small amounts of tobacco
7 smoke.
8 So you have a broad array of
9 carcinogens present that can combine, interact with
10 one another to cause cancer.
11 Q. All right, Doctor. We're going to
12 come back to that chart later but have you also
13 prepared graphics that would help explain how
14 cigarette smoke causes cancer in a human being?
15 A. Yes.
16 Q. Now, we have a chart here of normal
17 cells. Where would these cells be found?
18 A. These cells are the cells that line
19 the airways of the tubes that you breathe through so
20 that's the trachea and the bronchi, the tubes that
21 move air from the outside air into the alveolar sacs
22 and combine oxygen.
23 This is your second line of defense.
24 We talked this morning about the first line which is
25 filtered out with your mouth and nose. Particles
Burns - direct/Patrick 803
1 impact on it or catch before they get into the lung.
2 If that doesn't happen or if the particles are so
3 small like with tobacco smoke they get in and they
4 deposit on the surface of these airways.
5 This is cut in a cross-section, okay,
6 and that -- that would actually look like a circle.
7 If you were to take the actual lung and the trachea
8 and cut it you would have a circle and this tissue

9 would completely surround that circle so inside
10 where the lining is you have these tall what are
11 called columnar cells because they look like columns
12 and at their tip you have little tiny hair-like
13 structures and on top of that, those hair-like
14 structures, there's a layer of mucous and water so
15 what happens normally the way your body was designed
16 to deal with things, the particles land, those
17 little cilia beat in a regular motion and they move
18 that blanket of mucous and water with the particles
19 sitting on top of it on up. Out of your lung,
20 cleaning your lung and you cough it out and swallow
21 or spit it out.

22 They also protect the lung because
23 these cells don't hang around very long. They're a
24 lot like the cells on the very surface of your skin.
25 They die, flake off and fall off into the air. That
Burns - direct/Patrick 804

1 way we can look at them in some of the specimens
2 that people cough up and so if you got something
3 bad, cancer-causing substance, carcinogen,
4 interchange this cell, it wouldn't make any
5 difference because that cell would get cast off and
6 would die. It's these cells down here on the bottom
7 that are dividing and dividing and dividing and
8 multiplying and multiplying and multiplying. If you
9 make a change there then it stays around forever
10 because those cells produce these cells that get
11 cast off but if you damage this nucleus, that damage
12 is going to stay around in all of the daughter cells
13 and all of their daughter cells and all of their
14 daughter cells forever. That's why we call these
15 cells in a sense immortal because they continue to
16 live --

17 Q. When you say daughter cell what do
18 you mean?

19 A. That's just the term that is used for
20 the results of division. This cell will divide into
21 two cells. Both of those cells are called daughter
22 cells. One of them will likely go on to mature and
23 become a columnar cell and one will stay down here
24 at the base of the cell and make another cell and
25 make another cell and make another cell and onward
Burns - direct/Patrick 805

1 through time. So this is a very powerful protective
2 mechanism to keep your lung from being damaged from
3 all of the things in the environment. You know,
4 smoke and dust and pollen and all kinds of things --
5 even for that matter bacteria and you have all had
6 the experience of having -- tried to swallow
7 something and have it go down the wrong way. That
8 fluid winds up here. You cough up some of it. The
9 rest of it gets brought up and so you don't then
10 develop pneumonia unless this process has been
11 damaged.

12 Q. What happens if you breathe in
13 tobacco smoke? What happens to this cilia and the
14 cells that lie underneath?

15 A. The very first thing that happens is
16 these guys get paralyzed. It occurs with the first
17 puff of the first cigarette. There are irritants
18 and toxins in the smoke largely in -- not in the
19 particles but in the gas and they paralyze. They

20 make these cilia stop breathing so now all of a
21 sudden as opposed to landing on the blanket and
22 making it -- getting moved up to the top of your
23 lung, coughed out and swallowed, it just sits there
24 so it has a longer time to begin influencing those
25 cells so that's the first puff.

Burns - direct/Patrick 806

1 Then you are smoking regularly. Six,
2 eight, ten puffs per cigarette, ten, twenty
3 cigarettes a day. That's 200 puffs a day, 200 times
4 a day that you're painting these carcinogens on top
5 of the cells and even this wonderful protective
6 mechanism starts to break down.

7 The first thing that happens is you
8 lose these tall columnar cells and they become
9 square -- they become tougher. They begin to look a
10 lot more like the cells in your skin which are
11 designed to take a lot more abuse than the cells
12 inside your airway.

13 One way that I like to think about
14 it, they sort of hunker down and become square,
15 cuboidal cells as a response to all the irritation
16 that's happening. This isn't cancer but now you've
17 lost the cilia and you've lost some of the distance
18 that protected you -- protected these cells from
19 being exposed to the carcinogens and now, ten puffs
20 a cigarette, 20 cigarettes a day, 365 days a year,
21 you're painting carcinogens again just like they did
22 with the rats or with the mice when they painted
23 that tar right over the top of the skin. You're
24 painting right on top of these cells and now these
25 cells -- the nucleus of the cells start to change

Burns - direct/Patrick 807

1 because cancer isn't a single change in a single
2 cell. It's not like being hit by a bolt of
3 lightening.

4 What happens is you have a series of --
5 a long series of different changes in the cell. It
6 occurs slowly over time and some of the problems
7 require one change before the second change can
8 occur so these long sequence of changes over time
9 slowly progress from these normal cells to cancer
10 but what is a cancer?

11 A cancer has two characteristics.
12 There's all kinds of complex chemistry involved but
13 there's two characteristics. One is it can't stop
14 growing. If you cut your skin and the way it heals
15 is the skin on both sides start to heal, they grow
16 in and they cover that cut. Cover up the surface
17 and stop. As soon as the cells from either side
18 come in contact with one another, they stop growing;
19 otherwise, they'd mound up and some people actually
20 have an abnormality that occurs where the scar
21 creeps up. It's called keloid. You get a big
22 bumped-up scar. That's because those cells didn't
23 stop growing when they bumped into each other and
24 that by itself would be bad but then they gain --
25 the second characteristic.

Burns - direct/Patrick 808

1 The characteristic is they gain, they
2 eat away or invade the tissue around it so now over
3 a long period of time, change after change after
4 change after change the cells have become more and

5 more abnormal and they have lost the ability to stop
6 growing when they bump up against one another and
7 they gain the ability to eat away at the tissue
8 around it.

9 In the start of that process we begin
10 to see changes here in the nucleus. Can I have the
11 next --

12 Q. Before we go to the next slide, say,
13 this person quits smoking and is no longer exposed
14 to cigarette smoke. Could the process be reversed?

15 A. Some of this process reverses.
16 Oftentimes people don't come all the way back
17 particularly if they've been smoking for, you know,
18 15 or 20 years or more. Much of this change has
19 already occurred and you can't reverse it but some
20 of the changes you can.

21 The changes due to irritation, okay,
22 the recovery of the cilia -- cilia recover in about
23 40 minutes after you stop smoking.

24 These changes go back to cilia cells
25 and these cuboidal cells occur somewhere about two
Burns - direct/Patrick 809
1 or three months to a year and that's why some of you
2 may have had the experience of talking with friends
3 who said they quit smoking and developed a cough.
4 The cilia began to work. They begin clearing all of
5 this stuff that had piled up in the lung and these
6 cells were returning to normal and so there was more
7 stuff coming up than there normally would be and
8 they begin to cough, okay?

9 So the next step is called dysplasia.
10 Again, not getting cancer. As you can see most of
11 these nice round nucleus has become bigger and
12 they're less organized. I said to some folks the
13 other day it looks like my son's room. You know,
14 everything is all strewn all over everything. All
15 of the DNA that is present there is less organized,
16 okay? And it's the DNA that causes the replication
17 of the cell.

18 Carcinogen comes in, attaches to that
19 DNA and makes it make mistakes and when it makes
20 mistakes most of them don't count because they're
21 fatal to the cell. The cell dies but maybe one out
22 of every 80,000 or so is one that damages the cell
23 in a way that the cell can continue to live but it's
24 changed a little bit in function. It's lost some of
25 its organization, it's lost some of its surface
Burns - direct/Patrick 810

1 protections and that is then inherited by the next
2 cell and that next cell gets damaged in another
3 place or another part of the same gene and that
4 continues to happen until one of these cells become
5 a cancer. This is the stage where it's
6 disorganized, it becomes bigger.

7 Then we go to the next stage which is
8 the one we begin to become concerned about,
9 metaplasia, and in metaplasia this is the
10 precancerous stage. Now, not only are these cells'
11 nucleus bigger and irregular but they actually look
12 mottled. The color of that nucleus has bumps and
13 lumps on it and things are really beginning to look
14 very, very primitive and disorganized which is the
15 way a cancer cell looks. So this is a stage that,

16 for example, in a PAP smear we would warn a woman to
17 have her come back to get another PAP smear very
18 soon, perhaps do some treatment in order to prevent
19 this from going on to developing cancer.

20 The same is true in the airway except
21 you can't see it easily and do that kind of
22 prevention.

23 And, finally, one or more of these
24 cells becomes a cancer. It loses the ability to
25 bump up against the cell next to it and stop and
Burns - direct/Patrick 811

1 then you have what's called carcinoma in situ which
2 is very dark as you could see.

3 Carcinoma in situ. Now, you can see
4 the organization of the cells. That layer that was
5 nice and organized with cells stacked on top of one
6 another is lost. The cells are growing in a
7 humble-jumble. They're growing in -- bumping up
8 into the surface, bumping down underneath but they
9 haven't gone through this lining of the -- it's
10 called the basement membrane and it's the lining of
11 all of those cells that is sort of like a very thin
12 sheet that divides those cells and the airway from
13 the tracheal structure underneath it so it hasn't
14 eaten away yet so it's called in situ, in site.

15 These cells are cancer cells but they
16 haven't yet progressed beyond the airway.

17 And then the last stage, of course,
18 is the one that we're familiar with with cancer
19 patients where the tumor has grown, it has invaded
20 through the tissue around it, it may have broken
21 into the bloodstream and shed cells, it goes to
22 other organs in the body, the brain, the bone, the
23 adrenal gland, the liver, and they begin to grow
24 there and it is the local growth, the tumor getting
25 bigger, growing around the blood vessels, growing
Burns - direct/Patrick 812

1 around the heart, obstructing your ability to
2 breathe plus the damage to all of the other organs
3 from the metastases, the metastatic cancers that
4 ultimately kill the individual.

5 Cancer is derived from the Greek word
6 crab because to the early Greeks it appeared that
7 the cancer was a crab eating away at something. You
8 lose weight. You're in pain. You have this mass
9 that continues to grow and destroy, eat away at the
10 tissue around it and so therefore it's a very apt
11 name.

12 Q. Doctor, are there different known
13 cell types of cancers?

14 A. Yes.

15 Q. And what are those different cell
16 types of cancer?

17 A. There are four main cell types of
18 lung cancer and --

19 Q. Well, what are cell types? What does
20 that term mean?

21 A. When you look under the microscope
22 and you see a cancer you can see remnants, pieces of
23 the organization of the cell; where it grew from,
24 where it developed from and so some of the cells
25 look more like the surface cells. Those cuboidal
Burns - direct/Patrick 813

1 cells that I showed you, right? Others look more
2 like glands or the alveolar cells that are present
3 in the body and others have different
4 characteristics one of which makes them look like
5 some of the nervous elements or neuroendocrine
6 elements that are present within the lung so by
7 looking at them you can see a resemblance to the
8 cells they originally were derived from.

9 Q. Now, are there various cell types of
10 lung cancer?

11 A. Yes.

12 Q. And what are they?

13 A. There are four major cell types of
14 lung cancer. We divide them clinically into small
15 cell carcinoma and nonsmall cell carcinoma, and the
16 reason for that is that small cell carcinoma is felt
17 to be disseminated as soon as the diagnosis is made.

18 Q. Doctor --

19 A. So you find it very early. Then the
20 nonsmall cell carcinomas have three types. One is
21 squamous cell, one is adenocarcinoma and the last is
22 sort of a combined category called large cell
23 carcinoma where the cells are just much more bigger
24 and much less organized.

25 Q. Would it be helpful to use the chart
Burns - direct/Patrick 814
1 and write these terms down?

2 A. My handwriting is no better than my
3 drawing, unfortunately.

4 Q. Okay. All right.

5 So there's adenocarcinoma, squamous
6 cell carcinoma, large cell carcinoma and small cell
7 carcinoma.

8 A. Correct.

9 Q. Four -- four major cell types?

10 A. Those are the four major cell types
11 of cancer that occur currently in the United States.
12 That has been so for the last 50 years.

13 Q. All right. Are all of those cell
14 types caused by cigarette smoking?

15 A. Yes, they are. They reflect the
16 effect of cigarette smoke or we believe they reflect
17 the effect of cigarette smoke on different cells
18 within the lung.

19 Q. And the cell type adenocarcinoma, is
20 that caused by cigarette smoke?

21 A. Yes, it is. There's no question that
22 it is caused by cigarette smoke.

23 Q. Now, Dr. Burns, at our request did
24 you review medical records pertaining to Constance
25 Mehlman?

Burns - direct/Patrick 815
1 A. Yes, I did.

2 Q. And from a review of the medical
3 records did you determine whether or not she smoked
4 cigarettes?

5 A. Yes. The medical record makes it
6 clear that she smoked cigarettes.

7 Q. And from your recollection what was
8 her cigarette smoking history?

9 A. From the medical record it is evident
10 that she smoked approximately a pack a day from age
11 17 until about 1974 although there is some evidence

12 that she quit smoking during her pregnancies.
13 Q. And what cell type of lung cancer did
14 she have?
15 A. She had adenocarcinoma of the lung.
16 Q. Doctor, based on your review of the
17 medical records and the cigarette smoking history
18 did you come to an opinion to a reasonable degree of
19 medical and scientific certainty as to the cause of
20 Constance Mehlman's lung cancer?
21 A. Yes, I did.
22 Q. And what is your opinion?
23 A. The cause of Mrs. Mehlman's lung
24 cancer was her cigarette smoking.
25 Q. Now, based on your review of the
Burns - direct/Patrick 816
1 medical records did you see a clinical course,
2 review the clinical course --
3 A. Yes, I did.
4 Q. -- that she went through?
5 And can you recall for the jury what
6 her symptoms were and how it came that she was
7 diagnosed as having lung cancer?
8 A. Unfortunately she had a rather
9 classic course for the presentation of lung cancer.
10 She presented with a pneumonia and one of the rules
11 in medicine is that you always get a chest X ray six
12 weeks after pneumonia's cleared to make sure that
13 it's not cancer. That wasn't done in this instance
14 and unfortunately it is a rule that is far more
15 commonly violated than observed simply because it's
16 difficult to get people back and it's difficult to
17 keep that in mind after they've been well for six or
18 eight weeks.
19 She had a pneumonia and then about a
20 year later she then became very short of breath and
21 at that time she presented with a very large mass in
22 her right lung and fluid collecting around that
23 right lung. The importance of the fluid is that
24 they sampled that and showed that there were cancer
25 cells already in the fluid.
Burns - direct/Patrick 817
1 What that means is that the cancer
2 had spread past the point in which it was possible
3 to cure it. That's almost by definition once the
4 cells have grown out enough to get into the fluid
5 around the lung the cell -- the cancer can no longer
6 be removed surgically and cured and she also had a
7 very large tumor at that point in time and that's
8 also a very bad predicament because it means that
9 the cancer has been there for a longer period of
10 time.
11 Q. When she was first diagnosed with
12 cancer was there anything that really could have
13 been done surgically?
14 A. No.
15 Q. And for what period of time did she
16 suffer from the cancer after the diagnosis?
17 A. She had a fairly -- again as is
18 unfortunate and true, she had a fairly rapid course
19 in that she had a period of about four, five months
20 between the time she was diagnosed and the time she
21 died of her lung cancer and that is unfortunately
22 common of lung cancers particularly when they're

23 diagnosed at a stage where they've already filled up
24 the pleural space.

25 Q. Dr. Burns, I believe you're a 818
Burns - direct/Patrick
1 pulmonologist. Is that correct?
2 A. That's correct.
3 Q. What is a pathologist?
4 A. A pathologist is someone who examines
5 tissue under the microscope to make a diagnosis or
6 to make a descriptive classification of the tissue
7 that's under the microscope. Commonly it is the
8 individual within the hospital who will define what
9 the tissue type, what the tumor type of a cancer is.
10 When you take out a piece, send it to
11 the pathologist, the pathologist would cut a very
12 thin slice of it, stain it, look at it under the
13 microscope and say, This is an adenocarcinoma of the
14 lung.

15 Q. Did a pathologist in this case
16 determine what cell type this cancer was?
17 A. Yes. There were two pathologic
18 determinations. One was at the time that they took
19 the fluid out of the chest and that fluid contained
20 cancer cells and the cancer cells were nonsmall cell
21 lung cancer. That is that group of squamous cell
22 adenocarcinoma and large cell. And then at autopsy
23 they were able to obtain a larger piece of the
24 tissue and at that point they were able to clearly
25 make the diagnosis of adenocarcinoma of the lung.
Burns - direct/Patrick 819

1 Q. Now, the fact that Mrs. Mehlman had
2 an adenocarcinoma, does that in any way influence
3 your opinion that cigarette smoking was the cause?
4 A. No, absolutely not. As a matter of
5 fact, adenocarcinoma is now becoming the most common
6 cause -- most common type of cancer that occurs.
7 Q. And has that changed over time?
8 A. Yes. The original lung cancers were
9 mostly squamous cell carcinomas and over the last 30
10 years or so we've seen a steady increase in the
11 fraction of lung cancers diagnosed that are
12 adenocarcinomas.
13 Q. And to what do you attribute this
14 increase in adenocarcinomas?
15 A. While we're not 100 percent certain
16 at this point in time we believe that there are
17 two principal things that are going on.
18 One is --
19 MR. BIERSTEKER: Objection, Your
20 Honor. May I approach?
21 THE COURT: Yes. Folks. Get up and
22 take a stretch. Let me talk to the lawyers for a
23 minute.
24 (The following discussion takes place
25 at side bar.)
Burns - direct/Patrick 820

1 MR. BIERSTEKER: If I am not mistaken --
2 THE COURT: Excuse me. Excuse me.
3 I'm still on the record.
4 MR. BIERSTEKER: If I'm not mistaken
5 Dr. Burns is to offer an opinion on a theory that
6 carcinoma has been increasing because of filtered
7 cigarettes and, first of all, that is only a theory

8 and, secondly, I'm not sure that that was disclosed
9 in his disclosure statement. I do not recall seeing
10 it there unless I missed it. I don't recall him
11 offering that opinion.

12 MR. ROSENBERG: I'm --
13 THE COURT: Ditto?
14 MR. ROSENBERG: Ditto. Also maybe we
15 can get some clarification from Mr. Patrick as to
16 what he's going to say in answer to the question.

17 MR. PATRICK: Well, he's going to say
18 that in his opinion carcinomas have increased as a
19 result of filters with light cigarettes, depth of
20 inhalation and that's caused the increase. I
21 thought we had --

22 MR. BIERSTEKER: I don't have it here --
23 I don't have the disclosure statement here but I was
24 surprised when I heard it come out of his mouth
25 because I don't think it's there. Do you have it?
Burns - direct/Patrick 821

1 MR. PATRICK: I'd have to look --
2 THE COURT: Don't look at me.
3 MR. ROSENBERG: But there's another
4 question -- another problem that flows directly from
5 what Mr. Patrick just said when he talked about
6 light cigarettes and the depth of inhalation which
7 is really connected with depth of inhalation of
8 light cigarettes which is not in this case.

9 MR. PATRICK: That's true but --
10 THE COURT: Wait. Wait. Wait.
11 Gentlemen this lady is trying to take down your
12 objections. Be kind. One at a time. Go ahead, Mr.
13 Rosenberg.

14 MR. ROSENBERG: It's not in this
15 case. He's bringing into this case the light
16 cigarettes issue and inhalation of light cigarettes.
17 That's what he was talking about, what his testimony
18 is all about on this issue.

19 MR. PATRICK: She smoked filtered
20 cigarettes and that's part of his opinion.

21 MR. ROSENBERG: But the studies as I
22 understand it are based on light cigarettes and
23 depth of inhalation of light cigarettes and
24 cigarettes whose nicotine levels are much, much
25 lower than those that Mrs. Mehlman smoked and you
Burns - direct/Patrick 822

1 have no evidence to connect her smoking behavior to
2 this kind of testimony.

3 MR. PATRICK: Except that she smoked
4 filtered cigarettes and he's going to say that the
5 use of filters increased the incidence of
6 adenocarcinoma.

7 THE COURT: I'm ready. Any response?
8 You let me know.

9 MR. BIERSTEKER: Well, again, I
10 thought that this was not disclosed. I really
11 don't.

12 MR. PATRICK: But it's no secret.
13 THE COURT: Oh, golly. You've given
14 that word a whole new worth in my court, haven't
15 you?

16 It better be there, number one. I
17 thought you were just giving a basic objection that
18 it's the basis of his opinion. He started to say

19 it's only a theory but I think -- as opposed to I
20 have an opinion in my estimation -- my estimation,
21 reasonable degree of medical probability that
22 otherwise the opinion is worth less so -- you know,
23 not as complex as all you big people but just the
24 basic works sometimes.

25 Light cigarettes at this point are
Burns - direct/Patrick 823

1 not related as opposed to her specific unless you
2 talk about them in the theory as it goes back and
3 forth and shifting.

4 MR. PATRICK: I understand.
5 THE COURT: But state your question,
6 put it in terms of filter and it better be there. I
7 don't make it up, folks.
8 MR. BIERSTEKER: I understand.
9 THE COURT: Just the basic rules.
10 MR. BIERSTEKER: Thank you.
11 (The following takes place in open
12 court:)
13 THE COURT: Thank you. New question.
14 BY MR. PATRICK:

15 Q. Dr. Burns, do you have an opinion to
16 a reasonable degree of medical certainty as to
17 whether the use of filters on cigarettes have had
18 any impact on the increase of the incidence of
19 adenocarcinoma?
20 A. Yes, I believe that there is -- that
21 is one of the issues that has increased the
22 adenocarcinoma rates that have occurred.
23 Q. Dr. Burns, can you explain to the
24 jury what the term relative risk means?
25 A. Certainly.

Burns - direct/Patrick 824

1 Oftentimes when we are doing studies
2 comparing rates of reasonableness you are interested
3 in being able to draw a comparison between two
4 groups and so we describe things as relative risks;
5 that is, the risk in one group compared to the risk
6 in another group.
7 One way to do that and the way that
8 it's commonly done in studying cigarettes is to look
9 at the death rate in cigarette smokers compared to
10 the death rate of those who never smoked.
11 If you look at lung cancer, for
12 example, the death rate in cigarette smokers is ten
13 times higher or twenty times higher depending on how
14 much they smoked than the rate in those who never
15 smoked cigarettes and so relative risk means the
16 risk of getting disease compared between two sets of
17 individuals or the relative risk of developing
18 disease if you smoke compared to somebody who
19 doesn't smoke.
20 Q. Have you prepared a chart that will
21 help explain this concept?
22 A. Yes.
23 Q. And, Doctor, if you could come down
24 with the Court's permission.
25 THE COURT: Sure.

Burns - direct/Patrick 825

1 Q. All right. Now, this is a graph that
2 says Cigarettes Cause Cancer --
3 A. Yes.

4 Q. -- and at the bottom it says number
5 of cigarettes per day.
6 What is the significance of these bar
7 graphs?

8 A. The significance of these bar graphs
9 is that they show a dose response relationship so
10 let me give you some background to explain this.

11 This is a graph drawn from a study by
12 the American Cancer Society, CPS 1 data, of a
13 million men and women. They were followed for 12
14 years so they weren't sick at the start and we asked
15 all about their smoking behaviors and other
16 characteristics and we followed them forward in time
17 to see who developed cancer, okay? And the rate of
18 developing cancer for someone who never smokes is
19 one and that's by design, by definition. That's the
20 comparison group.

21 And we look at the rate of developing
22 lung cancer in people who smoked 1 to 9 cigarettes,
23 up about 3-1/2 fold. By the time they're smoking
24 less than a pack -- more than half a pack -- half a
25 pack or more, it's eight times the risk of someone
Burns - direct/Patrick 826

1 who's never smoked. With a pack a day, the risk
2 goes up to about 11 to 12-fold. By the time you're
3 two or more packs a day you're up 18 to 20 times the
4 risk of someone who's never smoked so what we have
5 then is a very clear demonstration that the more you
6 smoke the greater your risk of developing lung
7 cancer. That's very important for defining
8 causality but it's also important for assessing the
9 magnitude of the disease we expect to see in
10 populations and the more you smoke, the more tar you
11 inhale into your lung, the more lung cancer you're
12 going to get.

13 Q. Does the period of time over which
14 you smoke, let's say, one year versus ten years have
15 any impact on whether or not you'll develop cancer
16 from cigarette smoke?

17 A. Absolutely. Absolutely. And I
18 believe there's another graph that shows that.

19 This again is data from the same
20 study of a million men and women followed for 12
21 years. These again are data for men and they show
22 the increased risk of developing lung cancer in
23 people who smoked for various periods of time.

24 Now, these are current smokers.
25 These are people who are currently smoking.
Burns - direct/Patrick 827

1 So by the time someone has smoked
2 even as few as 10 to 14 years -- that actually is a
3 very long time but relative to someone's life span
4 it's not very long -- by the time they smoke 10 to
5 14 years the risk is up slightly.

6 By the time they're 15 years out it's
7 really three or four-fold increased and from 20
8 years on the risk continues to grow dramatically all
9 the time out to 50 to 59 years and that sounds like
10 a long time but most people start smoking in the
11 United States at age 15. That's the most common age
12 so these folks, the end of this curve is only people
13 who are 75 and that duration of smoking continues to
14 increase as they get 80 and older.

15 So the longer you smoke, the more
16 likely you are to develop lung cancer and it appears --
17 we don't know exactly where this onset occurs where
18 you actually hit one because we know you don't get
19 cigarette -- you don't get lung cancer from smoking
20 your first cigarette. That doesn't happen. We know
21 it takes time for that process to occur so somewhere
22 along by my best guess five years or more you begin
23 to accumulate some damage that places you in enough
24 risk of developing cancer and certainly by the time
25 you're 10 to 15 years out or 15 to 20 years out that
Burns - direct/Patrick 828

1 risk is now really quite real because again this is
2 the risk of dying from lung cancer. This is the
3 risk of that cell transforming. And it takes
4 somewhere around four to five years from the time
5 that cell transforms into a cancer cell to the time
6 that you die of the cancer. It's got to grow big
7 enough to do that and so somebody who's a current
8 smoker at, say, 20 years from cigarette smoke
9 probably had that cancer change back when they had
10 only been smoking for 15 years or so.

11 Q. Have you been able to break this down
12 in terms of women -- I know you said this was in
13 men. What is the impact of the risk if it's a
14 woman?

15 A. If these are the data for women again
16 from the American Cancer Society, CPS 1 data, they
17 are not as smooth and continuous because this study
18 was done in 1960 to '72 and we discussed earlier
19 that women had only been smoking in large numbers
20 from about 1935 on so there weren't huge numbers of
21 women who smoked for long periods of time and
22 therefore the numbers become less precise -- they
23 become more variable or move around more but you can
24 see that essentially the same relationship exists
25 for women.

Burns - direct/Patrick 829

1 We now know from this and other
2 studies that when you match up the amount that women
3 smoke, the duration, the number of cigarettes that
4 they smoke per day, that the risks in women are
5 essentially identical on a cigarette-per-cigarette,
6 duration-for-duration basis to those of men.

7 Q. Dr. Burns, if you were to have a
8 woman who was a smoker and she died at the age of 62
9 and she smoked on the average of 20 cigarettes a day
10 and smoked for 23 years what would her relative risk
11 for developing lung cancer be?

12 A. The relative risk from studies that
13 have been done again on this same set of studies,
14 the American Cancer Society studies, show that the
15 relative risk of someone with those characteristics
16 is a little bit over 2. It's about I think 2.1 or
17 2.19 even after 20 years of cessation.

18 Q. Do you have a graph or a chart that
19 demonstrates that?

20 A. I think I have a graphic that shows
21 the change of cessation, yes, and I think that's an
22 important one to show.

23 Q. All right. Can you see it right
24 there? Is this the --

25 A. No. This is simply the dose response

1 data for women showing that women who smoked 1 to 19
2 cigarettes per day -- this is actually women at age
3 60 to 69 who had smoked 20 to 29 cigarettes per day
4 so that the group that Mrs. Mehlman would have
5 fallen into, those who smoked 1 to 19 cigarettes per
6 day have a four-fold increased risk. Those who
7 smoked a pack a day have about a nine-fold increased
8 risk. Those who smoked more than a pack a day have
9 about a 13- or 14- fold increased risk.

10 Q. Well, if Constance Mehlman who is the
11 person in this case, if she stopped smoking in 1974
12 after smoking approximately a carton of cigarettes a
13 week for 23 years would that in any way change your
14 opinion that her cancer was caused by cigarette
15 smoke?

16 A. It would not change my opinion that
17 her cancer was caused by cigarette smoking. It
18 would have decreased her relative risk.

19 The problem that we face with this
20 issue is that Mrs. Mehlman doesn't have or didn't
21 have a relative risk of lung cancer. She had lung
22 cancer. So the question is what caused her lung
23 cancer so what you do is you look at the relative
24 risks in comparison to a nonsmoker to see the change
25 that occurs with the use of the tobacco product and

1 then with the duration of cessation and perhaps it
2 would help if we showed the graph with cessation
3 because that explains part of the reason why we see
4 this.

5 This is the risk changing with
6 quitting.

7 THE COURT: Can everyone see that
8 back there? It looks like you guys are squinting,
9 all right? Okay.

10 A. So you can see that it takes time but
11 the risk -- the excess risk in particular declines
12 but it does not ever go all the way back to that of
13 never smoking.

14 These folks have had enough change in
15 those cells, enough motion down the path towards
16 becoming a cancer. They don't ever get back to the
17 risk of someone who's never smoked.

18 For all smokers, when you look at
19 them at 20 to 24 years or 20 years of cessation, it
20 appears that they level out at somewhere around
21 twice the risk. Somewhere between two and three
22 times the risk of someone who has never smoked
23 cigarettes.

24 When you do a more detailed analysis,
25 the controls for both age -- age and cessation and

1 duration, and duration and cessation, we find that
2 in someone in Mrs. Mehlman's category her actual
3 risk would have been somewhat above two which means
4 that she has twice the risk of someone who's never
5 smoked or there was more than a 50 percent chance,
6 more probable than not, that her smoking caused her
7 lung cancer.

8 That's a mathematical argument that
9 is quite compelling mathematically but there's also
10 a biologic argument that for 20 years or more than

11 20 years this woman painted the cells in her lung
12 with these carcinogens puff after puff day after
13 day, ten puffs a cigarette, 20 cigarettes a day, 365
14 days a week, and she got cancer. The process went
15 to completion and to -- to make the argument that
16 somehow this 20 years --

17 MR. BIERSTEKER: Objection, Your
18 Honor. There's no question.

19 THE COURT: Just a minute. We're
20 getting into a far-ranging narrative so --

21 MR. PATRICK: Okay.

22 MR. ROSENBERG: I would ask the
23 Doctor to resume his seat if that's okay.

24 THE COURT: I'll control the
25 courtroom, okay?

Burns - direct/Patrick

833

1 Just ask your question. Do you need
2 the Doctor on his feet? Otherwise, I'll --

3 MR. PATRICK: Let's leave him on his
4 feet for right now --

5 THE COURT: Because you have a new
6 question, right?

7 MR. PATRICK: I got a new question.

8 THE COURT: I thought so.

9 Q. Now, I see on this it goes down but
10 it never reaches the bottom.

11 A. That's right.

12 Q. All right. And you're saying that
13 there was some reason for that. What I want to know
14 is biologically what is the reason for the fact that
15 it never returns to zero?

16 A. Biologically the reason is --

17 THE COURT: All right. Doctor, you
18 can sit down. I don't want to keep you on your feet
19 all day. Relax.

20 THE WITNESS: Thank you.

21 THE COURT: That's all right.

22 A. Biologically the reason is that
23 cancer is this process where you have a cellular
24 change, another cellular change, another cellular
25 change on the road that you progressed down until

Burns - direct/Patrick

834

1 you get to becoming a cancer cell. If you've been
2 moved halfway down that road by 20 years of exposure
3 to carcinogens when you stop you can't get back to
4 normal. Those cells still have that damage in their
5 nucleus, in their DNA that's replicating and is
6 being continued on and they're likely then to move
7 on to become a cancer so you can't get back to the
8 starting point of the person who was never a smoker,
9 who didn't have that 20 years of exposure.

10 Your body can do some repair, okay?

11 There's some fixing of the DNA that you can do but
12 by and large the damage that's there is fixed. In a
13 sense, you can make a cucumber into a pickle but you
14 can't make the pickle go back to being a cucumber
15 because the change has already occurred and it's
16 irreversible.

17 Q. New question, Doctor.

18 I want you to assume that Constance
19 Mehlman began smoking in 1951.

20 A. Yes.

21 Q. And up until 1959 we know that she

22 smoked but we don't know what brands she smoked.
23 A. Yes.
24 Q. But then in 1959 she smoked
25 approximately a carton a week of Camels or Marlboros
Burns - direct/Patrick 835
1 up until 1974 with some instances of her quitting
2 smoking during that period of time.
3 A. Yes.
4 Q. And my question is based on that
5 information can you say to a reasonable degree of
6 medical probability as to whether the exposure she
7 had to Camel cigarettes was a substantial
8 contributing factor or cause of her lung cancer?
9 A. Yes. Absolutely.
10 You can say that that exposure was a
11 substantial piece of moving her along the process to
12 a cancer; that is, was a substantial contributing
13 factor and contributed to the causation of her lung
14 cancer.
15 As a matter of fact, it appears from
16 the epidemiologic literature that it's the smoking
17 later rather than your early smoking, rather than
18 the first five to ten years of smoking that has a
19 more profound effect on relative risk.
20 Q. And essentially the same question --
21 the same question as to Marlboro.
22 Considering that smoking history was
23 her smoking Marlboro cigarettes a substantial
24 contributing factor or cause to the development of
25 her cancer?
Burns - direct/Patrick 836
1 A. Yes. Her smoking of Marlboro
2 cigarettes was a substantial contributing factor and
3 a substantial cause of her developing lung cancer.
4 It is a dose-response relationship and each dose
5 will make a contribution to the occurrence of her
6 lung cancer and the larger that dose, the greater
7 certainty we have that it made a meaningful
8 contribution.
9 Q. Doctor, you were talking about the
10 lines of evidence that have convinced the medical
11 and scientific community that cigarette smoking
12 causes disease.
13 A. Yes.
14 Q. Let me ask you about some other
15 factors.
16 Does stress cause cancer?
17 A. No. Stress does not cause cancer.
18 Q. Have -- has the subject of whether or
19 not stress causes cancer been analyzed with the same
20 kind of critical judgment using lines of evidence as
21 a -- as it has with cigarette smoking?
22 A. Yes. There's a body of evidence on
23 the relationship of stress and cancer that has been
24 examined quite extensively and it is felt that
25 stress relates to or influences the body's response
Burns - direct/Patrick 837
1 to a cancer. It doesn't cause it.
2 There is evidence that suggests that
3 someone who has gone through great life stress is
4 more likely to be diagnosed in the next 12 months
5 with a lung cancer -- would -- not with a lung
6 cancer but with other cancers. That evidence

7 doesn't fit biologically to causation. It fits with
8 the ability of the body to control the cancer and
9 slow its rate of growth and the feeling is that
10 stress may play a role in the rate of cancer growth
11 rather than the causation per se of lung cancer --
12 of cancer, particularly lung cancer.

13 Q. Did stress cause Constance Mehlman's
14 lung cancer?

15 A. No, it didn't.

16 Q. Does asthma cause lung cancer?

17 A. No, asthma does not cause lung
18 cancer.

19 Q. And has that question been subjected
20 to the vigorous type of critical review that
21 cigarette smoke -- the issue regarding cigarette
22 smoking has?

23 A. There is less extensive data on
24 asthma but it certainly has been subject to critical
25 review. Asthma contributes to lung cancer in two
Burns - direct/Patrick 838
1 ways -- actually chronic obstructive lung disease
2 contributes to -- of which asthma is one component,
3 one type of obstruction -- contributes to lung
4 cancer in likely two ways.

5 One is it damages the ability of the
6 lung to clear out the substances that we talked
7 about. If your airways narrow down and become tight
8 as they do in asthma or as they do in bronchial
9 obstructive lung disease then you have difficulty
10 bringing up secretions, they stay in the lung longer
11 and therefore the amount of cancer-causing damage
12 from any given inhalation of tar is likely to be
13 greater.

14 The second is that asthma is a
15 disease that causes inflammation in the airways. It
16 causes the airways to become irritated and reddened
17 and inflamed. When you do that you throw off the
18 damage, this protective level of cells that are the
19 cilia epithelial cells so that plus the inflammatory
20 process causing cells to divide more frequently may
21 make the lung more vulnerable to the occurrence of
22 lung cancer after exposure to a carcinogen but
23 asthma by itself doesn't cause lung cancer. It only
24 modifies the effect of exposure to a carcinogen.

25 Q. Did asthma cause Connie Mehlman's
Burns - direct/Patrick 839
1 lung cancer?

2 A. No. Cigarettes caused Connie
3 Mehlman's lung cancer.

4 Q. Doctor, does a high fat diet cause
5 lung cancer?

6 A. No. There are -- there is evidence
7 again that a high fat diet in one study or two
8 studies has been associated with an increased risk
9 of lung cancer. Those studies by and large have not
10 been replicated in the way that reproduces that
11 result and the current scientific thinking is not
12 consistent with a high fat diet causing lung cancer.
13 Again, there may be some modification of
14 carcinogenic exposure but it isn't the cause.

15 Q. Dr. Burns, does mental depression
16 cause lung cancer?

17 A. No. There again is evidence just as

18 there is with stress on the occurrence of cancer in
19 general with depression but that is again felt to
20 modify the rate of growth rather than to be a
21 causative factor.

22 There's no evidence that I am aware
23 of that is consistent with the abnormalities in the
24 brain with the release of dopamine that characterize
25 depression being in any way associated with the
Burns - direct/Patrick 840
1 causation of lung cancer.

2 Q. Okay.

3 MR. PATRICK: Your Honor, we're
4 moving to another area.

5 THE COURT: Well, let me see counsel
6 at side bar a second.

7 (At this time there is a discussion
8 off the record at side bar.)

9 (The following takes place in open
10 court:)

11 THE COURT: Ladies and gentlemen,
12 being people of honor I'm going to send you
13 downstairs for your coffee break. Notice it's 20
14 of. I'll give you a 15-minute coffee break. I'm
15 going to allow two and a half minutes down the
16 elevator, two and a half elevators up in the
17 elevator for a return resume time of three o'clock
18 on the dot. Fair enough? Okay. You can leave your
19 notebooks. We'll have Al bring you down.

20 (At this time the jury leaves the
21 Courtroom at 2:40 p.m.)

22 THE COURT: All right. Thank you
23 very much. We're in recess till three and off the
24 record.

25 (Recess taken at 2:40 p.m.)

Burns - direct/Patrick 841

1 (At this time the jury enters the
2 Courtroom at 3:00 p.m.)

3 THE COURT: All right. Thank you
4 very much. Please be seated.

5 Ladies and gentlemen, before we
6 resume I just want to make some announcements and
7 some reminders to you.

8 We will not be meeting tomorrow as
9 per my promise not meeting on Fridays. We will not
10 be meeting tomorrow so that will give you an
11 enjoyable time to rest up a little.

12 Also I'm going to ask you again as I
13 did yesterday, please enjoy your time away from here
14 by watching a movie, sports page, whatever. Not the
15 news, newspaper, radio, okay, because there may be
16 some comment regarding the case or tobacco issue and
17 I really don't want you to consider that or read
18 that, okay, so I'm just reminding you again. Sorry
19 to keep sounding like a broken record but I know
20 this is a natural behavior that you have to read
21 these things or hear, watch the news but please
22 let's have a little bit restraint from the news.
23 The world will go on without us and there will be
24 time to get back, all right?

25 So with that I'm also going to remind
Burns - direct/Patrick 842

1 you to have a good weekend when we finish today but
2 again please do not discuss the case either amongst

3 yourselves or this weekend. I know you'll probably
4 get questions but remember you took an oath, swore
5 to me so please keep those issues in mind, all
6 right?

7 All right. Let's begin again.
8 MR. PATRICK: Okay.

9 BY MR. PATRICK:

10 Q. Dr. Burns, earlier we talked about
11 your graph that indicated the various carcinogens in
12 cigarette smoking.

13 A. Yes.

14 Q. And I believe one of those
15 carcinogens was benzo(a)pyrene.

16 A. That's correct.

17 Q. And to refresh my recollection what
18 type of carcinogen is it?

19 A. That's what's called a polycyclic
20 aromatic hydrocarbon.

21 THE COURT: Oh, let me make one
22 interjection here. We got a microphone just in case
23 you thought you're hearing -- yeah. No. It's not
24 signs from above. Thank you for reminding me, Miss
25 Manning but --

Burns - direct/Patrick 843

1 THE WITNESS: I had a voice box
2 transplant.

3 THE COURT: Right. Ultimately we'll
4 work out the little kinks. Normally we don't need
5 the amplification microphone but because we have so
6 many fans on counsel and I agreed that it will be of
7 assistance to everybody so we'll keep this standard
8 throughout the trial, all right?

9 Go ahead. I'm sorry, sir.

10 Q. Doctor, I'm next going to show what
11 is in evidence as plaintiff's 44785.

12 A. Yes.

13 Q. Can you see that on your monitor
14 right there?

15 A. It's not quite big enough for me to
16 read.

17 Q. All right. Let's see --

18 A. Here we go.

19 Q. Okay. This is a memorandum made on
20 September 28th, 1956 and the author of it is Alan
21 Rodgman.

22 Dr. Burns, are you familiar with Alan
23 Rodgman?

24 A. Yes. He was one of the senior
25 scientists for R.J. Reynolds.

Burns - direct/Patrick 844

1 Q. And in this document he describes the
2 isolation of -- in fact it says to describe the
3 experimental investigation on the isolation and/or
4 identification of several polycyclic aromatic
5 hydrocarbons present in the cigarette smoke
6 condensate from Camel blend tobacco. And is that
7 the same term that you just described to us --

8 A. Yes.

9 Q. -- that benzene is a member of in
10 that family?

11 A. Benzene is not a member of it but
12 benzo(a)pyrene is a member.

13 Q. Benzo(a)pyrene. I'm sorry.

14 And it says of the five polycyclic
15 aromatic hydrocarbons naphthalene, anthracene,
16 fluouran --
17 A. Fluouranthene.
18 Q. And 3,4-benzpyrene --
19 A. Yes.
20 Q. -- have been isolated and identified
21 as a cigarette smoke condensate of Camel blend
22 tobacco.
23 Is 3,4-benzopyrene the same substance
24 that's on this graph?
25 A. Yes, it is.
Burns - direct/Patrick 845
1 THE COURT: And again the graph
2 you're referring to is --
3 MR. PATRICK: The -- his graph
4 entitled Chemicals in Cigarette Smoke and we will
5 have these marked at the end of the day.
6 THE COURT: Sorry. Just for record
7 purposes.
8 Q. Now, Dr. Burns, I'd like to show you
9 plaintiff's Exhibit 29125 which is also in evidence
10 and do you see the author here, Alan Rodgman, 1962?
11 A. Yes. That's correct.
12 Q. And this is a critical and objective
13 appraisal of the smoking and health problem?
14 A. Yes. That's correct.
15 Q. And have you reviewed this document
16 previously?
17 A. Yes, I have.
18 MR. PATRICK: Next page.
19 Q. And in 1962 would you agree with Dr.
20 Rodgman that the evidence existing at that time
21 accumulated -- has been accumulated to indict
22 cigarette smoking as a health hazard is
23 overwhelming?
24 A. Yes. I would agree that that was
25 true at that point in time and still is.
Burns - direct/Patrick 846
1 Q. And evidence challenging such an
2 indictment is scant?
3 A. That's also correct.
4 Q. Now, Dr. Burns, I'd like to draw your
5 attention to plaintiff's 20745 also in evidence
6 dated May 1, 1963 --
7 THE COURT: Excuse me. Let me just
8 interject. Folks, when you hear counsel say in
9 evidence -- you'll hear this from both sides. These
10 are documents in consideration -- and I'll give you
11 this instruction later -- that will be available to
12 you. They're in evidence. That's all that means.
13 Q. This is a letter from George Allen of
14 The Tobacco Institute to Dr. Hunley with a cc to Mr.
15 Bowman Gray.
16 Are you familiar with the name of
17 James Hunley?
18 A. Yes. He was one of the physicians or
19 one of the scientists working with the Surgeon
20 General's advisory committee.
21 Q. And do you see that Mr. Allen is
22 forwarding Dr. Hunley a communication addressed to
23 you in this regard by Mr. Bowman Gray, Chairman of
24 the Board of R.J. Reynolds Tobacco Company?

25 A. Yes. That's what the document says.
Burns - direct/Patrick 847

1 MR. PATRICK: Next, please.

2 Q. And this is a letter dated April 23,
3 1963 to Dr. Hunley from I believe it's Bowman Gray
4 and the last paragraph, it says, Quite apart from
5 the question of smoking and health the Reynolds'
6 scientists have made and are continuing to make
7 intensive studies of a composition of cigarette
8 smoke. In this connection Reynolds' scientists have
9 published many papers relating to the composition of
10 cigarette smoking in some instances identifying
11 compounds and elements in cigarette smoke which have
12 not been reported previously --

13 THE COURT: We can't hear you.

14 Q. -- reported previously in the
15 literature.

16 You see the last paragraph?
17 If any other information is desired
18 and Reynolds can cooperate in any way in obtaining
19 it we should, of course, be pleased to do so.

20 A. Yes.

21 Q. All right.

22 MR. PATRICK: Next page, please.

23 That's the final?

24 Q. And attached to that letter is the
25 last page --

Burns - direct/Patrick 848

1 MR. PATRICK: Can we turn on the other
2 one, please.

3 Q. Doctor, you see the last page of that
4 particular exhibit?

5 A. Yes.

6 Q. Do you see the list of various
7 chemicals, eleven in number, and at the top the
8 composition of cigarette smoke?

9 A. Yes.

10 Q. Doctor, are any of those chemicals
11 considered to be carcinogens?

12 A. Not at the time this was written, no.

13 Q. And in that list is benzo(a)pyrene
14 mentioned?

15 A. No, it's not.

16 Q. Are there any polycyclic aromatic
17 hydrocarbons on that list?

18 A. No.

19 Q. I next show you 26462. This is a
20 document dated February 12, 1964 from Alan Rodgman,
21 the analysis of cigarette smoke condensate. Summary
22 of an eight-year study. Have you seen this document
23 previously?

24 A. Yes, I have. It's one of a series of
25 documents Dr. Rodgman produced.

Burns - direct/Patrick 849

1 MR. PATRICK: Next page, please.

2 Q. And do you agree where -- with Dr.
3 Rodgman where he states that as of 1964 examination
4 of the data in the preceding sections indicates that
5 cigarette smoke is indeed a complex material. A
6 total number of components in tobacco smoke
7 identified to date is about 800 of which about 500
8 have been identified by members of the research
9 department of the R.J. Reynolds Tobacco Company?

10 A. Yes.
11 MR. PATRICK: Next page.
12 Q. And, Doctor, there's a paragraph by
13 Dr. Rodgman talking about benzo(a)pyrene and it's
14 otherwise known as what?
15 A. Benzpyrene. Polycyclic aromatic
16 hydrocarbon.
17 Q. In this paragraph, though, it is
18 often argued --
19 A. They are separate compounds.
20 THE COURT: I'm sorry. Wouldn't it
21 be easier maybe to let him do it since he has the
22 microphone?
23 MR. PATRICK: That's fine.
24 MR. BIERSTEKER: And may I have the
25 page number within the document because --
Burns - direct/Patrick 850
1 THE COURT: Absolutely.
2 MR. PATRICK: Page 59.
3 MR. BIERSTEKER: Thank you.
4 MR. PATRICK: All right.
5 Q. Doctor, could you read because you
6 have the microphone the -- that paragraph?
7 A. It is often argued that the amount of
8 benzo(a)pyrene or arsenous oxide in cigarette smoke --
9 THE COURT: Can you read it slowly so
10 she can take it down.
11 A. -- is insufficient to account for the
12 observed carcinogenicity of cigarette smoke. This,
13 of course, is true but no one has yet conducted the
14 obvious experiment to determine whether the amounts
15 of carcinogenic polycyclic aromatic -- poly
16 hydrocarbons plus the amount of carcinogenic
17 heterocyclic nitrogen compounds plus the amount of
18 arsenous oxide plus the amount of co-carcinogenic
19 phenol and fatty acids are sufficient to account for
20 the observed biologic results. Calculation has
21 indicated that the known carcinogens and
22 co-carcinogens in cigarette smoke can account for 90
23 percent of the observed activity.
24 Q. Now, Doctor, what you just read, was
25 that information or the information contained in any
Burns - direct/Patrick 851
1 of the preceding documents that we've just looked at
2 ever conveyed to the Surgeon General's committee
3 prior to or at the time of the issuance of the
4 Surgeon General's report?
5 A. No. The -- the substances identified
6 as carcinogens by Dr. Rodgman in his report were not
7 communicated by R.J. Reynolds to the Surgeon
8 General's committee.
9 Q. Now, I'm going to hand you the
10 Surgeon General's report which is Exhibit 50150 and
11 if you could turn to Page 58, please.
12 A. Yes.
13 Q. And I'm going to let you read this
14 paragraph as well, the one that I have highlighted.
15 THE COURT: This is not a simple
16 machine, folks. I've tried this.
17 A. Assays of tobacco smoke, tars for
18 carcinogenicity are done by applying a dilute
19 solution of tar in an in -- in an organic solvent
20 with a camelhair brush to the backs of mice

21 beginning when the animals are about six weeks old.
22 Application is repeated three times a week for a
23 period of a year or more. The results of a number
24 of such assays present a puzzling anomaly.

25 The total tar from cigarettes has
Burns - direct/Patrick 852

1 about 40 times the carcinogenic potency of the
2 benzo(a)pyrene present in the tar. The other
3 carcinogens known to be present in tobacco smoke are
4 with the exception of dibenzo(a,i)pyrene, much less
5 potent than the benzo(a)pyrene and they are present
6 in smaller amounts. Apparently, therefore, the
7 whole is greater than the sum of the known parts.

8 Q. All right. And if you could go down
9 to the -- down the page, please.

10 A. Yes. The paragraph that is
11 highlighted reads, If more were known about the
12 possible co-carcinogenicity of many inactive
13 compounds of tobacco smoke some of the apparent
14 discrepancy between isolation and bioassay data
15 might disappear.

16 Q. Now, Dr. Burns, do you have an
17 opinion to a reasonable degree of scientific
18 certainty that the conclusion of the Surgeon
19 General's report in 1964 would have been any
20 different had it had access -- the Surgeon General
21 had access to the information contained in the files
22 of R.J. Reynolds and the papers done by Alan
23 Rodgman?

24 A. Yes. It is apparent from those two
25 paragraphs that the conclusions drawn by Dr. Rodgman
Burns - direct/Patrick 853

1 with his observation and data set that he was
2 working from were sufficient to explain 90 percent
3 of the cancers that were occurring in animals and in
4 contrast the Surgeon General's committee was faced
5 with this paradox that while the tar could create
6 the cancer, the chemicals that were known to be
7 present in the tar weren't sufficient to explain it
8 and without that confirmation, without that matching
9 up it becomes much more uncertain that you can say
10 cigarettes cause cancer in everyone and so it is my
11 belief that they restricted the conclusion to men
12 because of these kinds of uncertainties in the other
13 data.

14 The Surgeon General's report in '64
15 concluded that cigarette smoking was a cause of lung
16 cancer in men and they said that while the evidence
17 pointed in that direction for women it wasn't
18 sufficient to define causality. Had more data been
19 available it was likely that that evidence would
20 have been sufficient.

21 Q. Dr. Burns, I'm going to draw your
22 attention to Exhibit 53, 53 which is in evidence,
23 October 22 to 28, 1972. William L. Dunn, Philip
24 Morris research center, Richmond, Virginia, entitled
25 Motives and Incentives In Cigarette Smoking.

Burns - direct/Patrick 854

1 A. Yes.

2 Q. Are you familiar with Dr. Dunn?

3 A. Yes, I am.

4 Q. And --

5 MR. PATRICK: Next page, please.

6 Q. Doctor, could you read this
7 paragraph, please.

8 A. The cigarette should be conceived not
9 as a product but as a package. The product is
10 nicotine. The cigarette is but one of many package
11 layers. There is the carton which contains the pack
12 which contains the cigarette which contains the
13 smoke. The smoke is the final package. The smoker
14 must strip off all these package layers to get that
15 which he seeks.

16 Q. You don't need to read the rest. I'm
17 just going to ask you the question.

18 Do you agree with Dr. Dunn that a
19 cigarette is nothing more than a nicotine delivery
20 device?

21 A. Yes. People smoke to get the
22 nicotine in the cigarette.

23 Q. Dr. Burns, if Constance Mehlman had
24 been -- had access to a cigarette that was a
25 nicotine delivery device but did not deliver the tar
Burns - direct/Patrick 855

1 component of a cigarette and she had that to smoke
2 during the course of her cigarette smoking history
3 would she have developed lung cancer?

4 A. Nicotine itself is not a
5 cancer-causing substance so if she smoked a product
6 that only delivered nicotine she would not, more
7 likely than not, medically more probable than not
8 have developed her lung cancer.

9 Q. Dr. Burns, I believe you had
10 mentioned that you had testified in court
11 previously?

12 A. Yes, I have.

13 Q. And, in fact, you have testified for
14 me or my firm on several previous occasions?

15 A. That's correct.

16 Q. And for being away from your home in
17 [DELETED] and your office, you're being compensated
18 for your time here today?

19 A. Yes, I am. I am being
20 well-compensated.

21 MR. PATRICK: Thank you, Dr. Burns.

22 THE COURT: Wait till Monday?

23 Okay. Ladies and gentlemen, that
24 concludes the direct examination of Dr. Burns. If
25 you remember, again this is the plaintiff's case.
856

1 The questions are being asked is direct examination.
2 When we resume Monday the defense will ask
3 questions. That's the cross-examination process I
4 told you about, okay? And we will hear from Dr.
5 Burns on Monday.

6 I would again ask you if you can
7 because I'm sure all the forces will be with us, the
8 computers, the lights, the water -- everything will
9 work on Monday. If you would try to get here
10 promptly close to 9. We'll bring you up and we'll
11 have Dr. Burns back and we will start the
12 cross-examination.

13 Have a wonderful weekend. Enjoy. Do
14 everything else but discuss this case. Keep out of
15 the newspapers, off the TV, listen to some records
16 or -- do they still make records? CD ROM, okay?

17 I happen to be a 78 collector of
18 records just in case someone was making fun, okay?
19 And I wish to thank you very much.
20 Leave your notes. I'll collect them and they'll be
21 distributed on Monday morning.
22 Thank you.
23 (At this time the jury leaves the
24 Courtroom at 3:23 p.m.)
25 THE COURT: Okay. Some kind person
857
1 with technological capability other than the lawyers
2 in this group disconnect the Doctor and everyone
3 have a seat.
4 Just to finish up scheduling --
5 Doctor, you're excused.
6 THE WITNESS: Thank you.
7 THE COURT: See you Monday morning.
8 I'm expecting some briefs in
9 tomorrow. There will be the swearing-in ceremony
10 tomorrow so get them to my chambers by three because
11 we'll all be downstairs after that. I believe that
12 was the only issue we had to talk about?
13 MR. ROSENBERG: That's correct, Your
14 Honor.
15 MR. BIERSTEKER: That's right, Your
16 Honor.
17 THE COURT: And counsel I assume have
18 informed each other about the pages. You haven't
19 done that?
20 MR. BIERSTEKER: Not yet but they
21 promised it immediately --
22 MR. PATRICK: Just as soon as I can I
23 will. Immediately.
24 MR. MIGLIORI: Today.
25 THE COURT: You fall right into that
858
1 northeast nomenclature. Now. Yesterday. Now.
2 All right. Hearing nothing else I'm
3 going to find one of my law clerks to see if I can
4 download those. I'm really sorry. I thought this
5 was my Dell computer. I was so excited that it
6 worked. So thanks, everybody, and have a good
7 weekend. Try to get rest if you can and I'd like to
8 start as soon as close to nine o'clock as possible.
9 For those of you who are observing holidays this
10 weekend, good Passover?
11 MR. ROSENBERG: (Indicates.)
12 THE COURT: Okay. And the rest of us
13 to come. Thank you so much.
14 MR. ROSENBERG: Thank you, Your
15 Honor.
16 MS. FUCHS: Thank you, Your Honor.
17 (3:25 p.m.)
18
19
20
21
22
23
24
25